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Proclamation 10829 of October 3, 2024

The President

National Manufacturing Day, 2024

By the President of the United States of America**A Proclamation**

American workers and the unions who fight for them represent the best of our country. They help power our economy and strengthen our middle class. On National Manufacturing Day, we celebrate the ingenuity, grit, drive, and determination of the American worker. We thank them for their contributions, and we recommit to investing in their productivity and success.

There have always been competing visions for the future of America. Some envision a future in which the failed trickle-down policies that hurt working families for more than 40 years are continued. When I think about our future, I see an America where we grow the economy from the middle out and the bottom up—not the top down. I see an America where working people finally have a fair shot. Above all, I see a future that is made right here in America.

That is why my Administration has invested in American manufacturing to restore the backbone of our Nation: the middle class. Together, we are doing what has always worked best in this country—investing in all of America and in all Americans. My Investing in America agenda—including my Bipartisan Infrastructure Law, CHIPS and Science Act, and Inflation Reduction Act—is revitalizing American manufacturing. So far, we have attracted over \$910 billion in private sector investment in manufacturing and clean energy nationwide and seen spending on factory construction soar to new records, roughly triple the pre-pandemic average. These investments are helping create hundreds of thousands of jobs—including over 700,000 manufacturing jobs—building new semiconductor fabs, electric vehicle and battery factories, and so much more, here in America. And we are working with employers, unions, community colleges, high schools, and other partners to ensure American workers are trained for the good manufacturing jobs we are generating.

We have also made sure that Federal funds support American manufacturing. “Buy American” has been the law of the land since the 1930s. Past administrations said a lot but did not do a lot. On my watch, Federal projects have been made with American products and built by American workers. I fought for the passage of the “Build America, Buy America Act,” which established domestic content preferences in Federal infrastructure spending, as part of the Bipartisan Infrastructure Law. I signed the “Federal Research and Development in Support of Domestic Manufacturing and United States Jobs” Executive Order, directing Federal agencies to prioritize domestic manufacturing when it comes to research, development, innovation, and bringing inventions to market. My Administration also made the strongest changes to Buy American rules in nearly seven decades by increasing the domestic content threshold for Federal procurement from 55 percent to 65 percent in 2024. I also announced new requirements for lumber, glass, fiber optic cables, and other construction materials used in Federal infrastructure projects to be made in America. And we will keep working to ensure that American taxpayer dollars are invested in American workers.

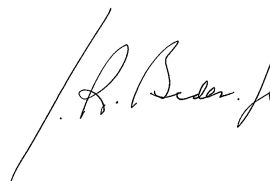
Growing up in Scranton, Pennsylvania, I learned a basic value set—money does not determine your worth, and all anyone wants is a fair shot. When

I look at the economy, I see it through the eyes of Scranton. That is why I came into office determined to write a new chapter in our American comeback story—one where we can take pride in knowing that we can still get big things done in this great Nation.

During National Manufacturing Day, may we rededicate ourselves to writing that story by making the phrase “Made in America” not just a slogan but a reality.

NOW, THEREFORE, I, JOSEPH R. BIDEN JR., President of the United States of America, by virtue of the authority vested in me by the Constitution and the laws of the United States, do hereby proclaim October 4, 2024, as National Manufacturing Day. I thank our manufacturing workers for all that they do to strengthen our Nation, encourage all Americans to look for ways to get involved in their communities, and call on everyone to join me in participating in National Manufacturing Day and, most importantly, buying American.

IN WITNESS WHEREOF, I have hereunto set my hand this third day of October, in the year of our Lord two thousand twenty-four, and of the Independence of the United States of America the two hundred and forty-ninth.

A handwritten signature in black ink, appearing to read "Joe Biden", is written over a horizontal line.

Presidential Documents

Presidential Permit of October 3, 2024

Authorizing Southwebb Bridge Company LLC To Construct, Maintain, and Operate a Vehicular and Pedestrian Border Crossing Near Laredo, Texas, at the International Boundary Between the United States and Mexico

By virtue of the authority vested in me as President of the United States of America (the “President”), I hereby grant permission, subject to the conditions set forth herein, to Southwebb Bridge Company LLC (the “permittee”) to construct, maintain, and operate a vehicular and pedestrian crossing located on the United States border with Mexico in Laredo, Texas, as described in the “Presidential Permit Application Laredo 4/5 International Bridge” dated March 15, 2022 (“March 15, 2022, Application”), by the permittee to the Secretary of State and determined to be complete on June 6, 2024, in accordance with 33 U.S.C. 535d and associated procedures.

The term “Border facilities” as used in this permit consists of the bridge, its approaches, and any land, structures, installations, or equipment appurtenant thereto located on the United States side of the international boundary between the United States and Mexico in the proposed project site located approximately 12.6 miles south/southeast of the City of Laredo, Texas, approximately 3.0 miles west of U.S. Highway 83, approximately 4.4 miles southwest of Texas State Highway Loop 20, approximately 10.5 miles southwest of State Highway 359, and approximately 10.6 miles south of Interstate Highway 35.

This permit is subject to the following conditions:

Article 1. The Border facilities herein described and all aspects of their operation are subject to all the conditions, permissions, and requirements of this permit and any subsequent Presidential amendment to it. The construction, maintenance, and operation of the Border facilities shall be in all material respects as described in the March 15, 2022, Application.

Article 2. The standards for and the manner of construction, maintenance, and operation of the Border facilities are subject to inspection by the representatives of appropriate Federal, State, and local agencies. The permittee shall grant officers and employees of such agencies that are duly authorized and performing their official duties free and unrestricted access to said Border facilities.

Article 3. The permittee shall comply with all applicable Federal laws and regulations regarding the construction, maintenance, and operation of the Border facilities.

Article 4. (1) The permittee shall take or cause to be taken all appropriate measures to mitigate adverse impacts on or disruption of the human environment in connection with the construction, maintenance, and operation of the Border facilities. Mitigation measures are those that avoid, minimize, or compensate for adverse impacts.

(2) The permittee shall hold harmless and indemnify the United States for any claimed or adjudged liability arising out of construction, maintenance, and operation of the Border facilities, including environmental contamination from the release, threatened release, or discharge of hazardous substances or hazardous waste.

(3) The permittee is responsible for obtaining any required Federal, State, and local permits, approvals, and authorizations prior to commencing construction activities. The permittee shall implement the mitigation identified in any environmental decision documents prepared in accordance with the National Environmental Policy Act and Federal permits, including stormwater permits and permits issued in accordance with section 402 of the Clean Water Act (33 U.S.C. 1342). The permittee shall comply with applicable Federal, State, and local environmental laws.

Article 5. The permittee shall immediately notify the President or the President's designee of any decision to transfer custody and control of the Border facilities or any part thereof to any executive department or agency (agency) of the United States Government. Said notice shall identify the transferee agency and seek the approval of the President for the transfer of the permit. In the event of approval by the President of such transfer, this permit shall remain in force and effect, and the Border facilities shall be subject to all the conditions, permissions, and requirements of this permit and any amendments thereof. The permittee may transfer ownership or control of the Border facilities to a non-Federal entity or individual only upon the prior express approval of such transfer by the President, which approval may include such conditions, permissions, and requirements that the President, in the President's discretion, determines are appropriate and necessary for inclusion in the permit, to be effective on the date of transfer.

Article 6. The permittee is responsible for acquiring and maintaining any right-of-way grants or easements, permits, and other authorizations as may become necessary or appropriate. To ensure the safe operation of the Border facilities, the permittee shall maintain them and every part of them in a condition of good repair and in compliance with applicable law and use of best management practices.

Article 7. To the extent authorized by law, and consistent with any Donation Acceptance Agreements (DAAs) already executed with the permittee under the Donation Acceptance Authority found in 6 U.S.C. 301a and section 559 of title V of division F of the Consolidated Appropriations Act, 2014 (Public Law 113–76), as amended, as continued by 6 U.S.C. 301b, the permittee shall provide to the Commissioner of U.S. Customs and Border Protection (Commissioner) of the Department of Homeland Security and the heads of any other relevant agencies, at no cost to the United States, suitable inspection facilities, infrastructure improvements, equipment, and maintenance, as set forth in the DAAs. Nothing in this permit obligates such agencies to provide a particular level of services or staffing for such inspection facilities or for any other aspect of the port of entry associated with the Border facilities.

Article 8. Before beginning design activities, the permittee shall fulfill requirements associated with the following conditions, as refined by the relevant agencies below and as consistent with applicable law:

(1) Obtain the concurrence of the United States Section of the International Boundary and Water Commission, United States and Mexico;

(2) Provide a plan for the approval of the Commissioner detailing how the permittee will fund the necessary staffing by U.S. Customs and Border Protection for the Border facilities upon commencement of operations and thereafter;

(3) Provide a plan for the approval of the Administrator of General Services (Administrator) and the Commissioner detailing how the permittee will fund the necessary operations and maintenance costs for the Border facilities upon commencement of operations and thereafter;

(4) Provide a plan for the approval of the Administrator and the Commissioner detailing how the permittee will fund construction, outfitting (furniture, fixtures, and equipment to include information technology and necessary inspection technologies), technology integration, and outyear refresh

of said program elements for the Border facilities detailed in their March 15, 2022, Application; and

(5) Provide a plan for the approval of the Secretary of Transportation detailing construction and funding of commercial motor vehicle inspection facilities and detailing how the permittee will ensure the necessary funding for appropriate Department of Transportation staffing and operations and maintenance costs for the Border facilities upon commencement of operations and thereafter.

Relevant agencies will coordinate with the permittee to further refine the above conditions, as necessary, within 1 year of permit issuance.

Article 9. The permittee shall not initiate construction until the Department of State has provided notification to the permittee that the Department of State has completed its exchange of diplomatic notes with the Government of Mexico regarding authorization. The permittee shall provide written notification to the President or the President's designee at the time that the construction authorized by this permit begins, at the time as such construction is completed, interrupted, or discontinued, and at other times as may be requested by the President.

Article 10. Upon request, the permittee shall provide appropriate information to the President or the President's designee with regard to the Border facilities. Such requests could include requests for information concerning current conditions, environmental compliance, mitigation, or anticipated changes in ownership or control, construction, connection, operation, or maintenance of the Border facilities.

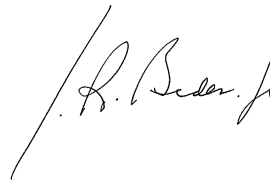
Article 11. The permittee shall file any applicable statements and reports required by applicable Federal law in connection with the Border facilities.

Article 12. The permittee shall make no substantial change inconsistent with the March 15, 2022, Application to the Border facilities, in the location of the Border facilities, or in the operation authorized by this permit, unless such changes have been approved by the President. The President may terminate, revoke, or amend this permit at any time at the President's sole discretion. The permittee's obligation to implement any amendment to this permit is subject to the availability of funds. If the permittee permanently closes the Laredo 4/5 International Bridge and it is no longer used as an international crossing, then this permit shall terminate, and the permittee may manage, utilize, or dispose of the Border facilities in accordance with applicable authorities. This permit shall continue in full force and effect for only so long as the permittee continues the operations hereby authorized.

Article 13. This permit shall expire 5 years from the date of its issuance if the permittee has not commenced construction of the Border facilities by that date.

Article 14. This permit is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

IN WITNESS WHEREOF, I, JOSEPH R. BIDEN JR., President of the United States of America, have hereunto set my hand this third day of October, in the year of our Lord two thousand twenty-four, and of the Independence of the United States of America the two hundred and forty-ninth.

A handwritten signature in black ink, appearing to read "J. R. Biden Jr.", with a long, sweeping horizontal line extending to the left.

[FR Doc. 2024-23401

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Federal Register

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Tuesday, October 8, 2024

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DEPARTMENT OF AGRICULTURE

National Institute of Food and Agriculture

7 CFR Part 3434

RIN 0524-AA39

Hispanic-Serving Agricultural Colleges and Universities (HSACU) Certification Process

AGENCY: National Institute of Food and Agriculture (NIFA), USDA.

ACTION: Final rule.

SUMMARY: This amendment to NIFA regulations updates the list of institutions that are granted Hispanic-Serving Agricultural Colleges and Universities (HSACU) certification by the Secretary and are eligible for HSACU programs for the period starting July 1, 2024, and ending July 1, 2025.

DATES: This rule is effective October 8, 2024 and applicable July 1, 2024.

FOR FURTHER INFORMATION CONTACT: Kelly Saunders; Financial Policy Specialist; National Institute of Food and Agriculture; U.S. Department of Agriculture; 805 Pennsylvania Ave; Kansas City, MO 64105; Voice: 802-318-6587; Email: HSACU@usda.gov.

SUPPLEMENTARY INFORMATION:

HSACU Institutions for Fiscal Year 2024: This rule makes changes to the existing list of institutions in appendix B of 7 CFR part 3434. The list of institutions is amended to reflect the institutions that are granted HSACU certification by the Secretary and are eligible for HSACU programs for the period starting July 1, 2024, and ending July 1, 2025.

Certification Process: As stated in 7 CFR 3434.4, an institution must meet the following criteria to receive HSACU certification: (1) Be a Hispanic-Serving Institution (HSI), (2) offer agriculture-related degrees, (3) not be designated an 1862 land-grant institution, (4) not appear on the Excluded Parties List

System (EPLS), (5) be accredited, and (6) award at least 15% of agriculture-related degrees to Hispanic students over the two most recent academic years.

NIFA obtained the latest report from the U.S. Department of Education's National Center for Education Statistics that lists all HSIs and the degrees conferred by these institutions (completion data) during the 2021–22 academic year. NIFA used this report to identify HSIs that conferred a degree in an instructional program that appears in appendix A of 7 CFR part 3434 and to confirm that over the 2020–21 and 2021–22 academic years at least 15% of the degrees in agriculture-related fields were awarded to Hispanic students. NIFA further confirmed that these institutions were nationally accredited.

The updated list of HSACUs is based on (1) completions data from 2020–21 and 2021–22, and (2) enrollment data from Fall 2022. NIFA identified 240 institutions that met the eligibility criteria to receive HSACU certification for FY 2024 (July 1, 2024 to July 1, 2025).

Section 7102 of the Agriculture Act of 2018 (Pub. L. 115–334) amended Section 1404(14) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3103(14)) to remove the opt-in, opt-out language for Hispanic Serving Agricultural Colleges and Universities (HSACU) in order to apply for Non Land-Grant College of Agriculture (NLGCA) designation.

Appeal Process: As set forth in 7 CFR 3434.8, NIFA will permit HSIs that are not granted HSACU certification to submit an appeal within 30 days of the publication of this notice.

Classification: This rule relates to public property, loans, grants, benefits, or contracts. Accordingly, pursuant to 5 U.S.C. 553, notice of proposed rulemaking and opportunity for comment are not required, and this rule may be made effective less than 30 days after publication in the **Federal**

Register. This rule also is exempt from the provisions of Executive Order 12866. This action is not a rule as defined by the Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. 601 *et seq.*, or the Congressional Review Act, 5 U.S.C. 801 *et seq.*, and thus is exempt from the provisions of those Acts. This rule contains no information collection or

recordkeeping requirements under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

List of Subjects in 7 CFR Part 3434

Administrative practice and procedure, Agricultural research, education, extension, Hispanic-serving institutions, Federal assistance.

Title 7 of the Code of Federal Regulations is amended accordingly as set forth below:

PART 3434—HISPANIC-SERVING AGRICULTURAL COLLEGES AND UNIVERSITIES CERTIFICATION PROCESS

■ 1. The authority citation for part 3434 continues to read as follows:

Authority: 7 U.S.C. 3103.

■ 2. Revise appendix B to read as follows:

Appendix B to Part 3434—List of HSACU Institutions, 2024–2025

The institutions listed in this appendix are granted HSACU certification by the Secretary and are eligible for HSACU programs for the period starting July 1, 2024 and ending July 1, 2025. Institutions are listed alphabetically under the state of the school's location, with the campus indicated where applicable.

Arkansas (1)

Cossatot Community College of the University of Arkansas

Arizona (12)

Arizona State University Campus Immersion
Arizona Western College
Chandler-Gilbert Community College
Cochise County Community College District
Estrella Mountain Community College
GateWay Community College
Glendale Community College
Mesa Community College
Phoenix College
Rio Salado College
Scottsdale Community College
South Mountain Community College

California (97)

Allan Hancock College
American River College
Antelope Valley Community College District
Bakersfield College
Butte College
Cabrillo College
California Baptist University
California Lutheran University
California State Polytechnic University—Humboldt
California State Polytechnic University—Pomona
California State University—Bakersfield

California State University—Channel Islands
 California State University—Chico
 California State University—East Bay
 California State University—Fresno
 California State University—Fullerton
 California State University—Long Beach
 California State University—Los Angeles
 California State University—Monterey Bay
 California State University—Northridge
 California State University—Sacramento
 California State University—San Bernardino
 California State University—San Marcos
 California State University—Stanislaus
 Chabot College
 Chaffey College
 Citrus College
 Clovis Community College
 College of San Mateo
 College of the Canyons
 College of the Desert
 College of the Sequoias
 Cosumnes River College
 Crafton Hills College
 Cuesta College
 Cypress College
 Diablo Valley College
 East Los Angeles College
 El Camino Community College District
 Evergreen Valley College
 Foothill College
 Fresno City College
 Fresno Pacific University
 Fullerton College
 Glendale Community College
 Hartnell College
 Imperial Valley College
 Lake Tahoe Community College
 Las Positas College
 Long Beach City College
 Los Angeles City College
 Los Angeles Harbor College
 Los Angeles Mission College
 Los Angeles Pierce College
 Los Angeles Southwest College
 Los Angeles Trade Technical College
 Madera Community College
 Merced College
 MiraCosta College
 Modesto Junior College
 Monterey Peninsula College
 Moorpark College
 Mt San Antonio College
 Mt San Jacinto Community College District
 Orange Coast College
 Oxnard College
 Palomar College
 Pasadena City College
 Porterville College
 Reedley College
 Rio Hondo College
 Riverside City College
 Saddleback College
 Saint Mary's College of California
 San Bernardino Valley College
 San Diego Mesa College
 San Diego Miramar College
 San Diego State University
 San Francisco State University
 San Joaquin Delta College
 San Jose City College
 San Jose State University
 Santa Barbara City College
 Santa Monica College
 Santa Rosa Junior College
 Southwestern College
 University of California—Irvine

University of California—Riverside
 University of California—Santa Barbara
 University of California—Santa Cruz
 University of La Verne
 University of Redlands
 Ventura College
 Victor Valley College
 West Hills College—Coalinga
 West Los Angeles College
 Yuba College

Colorado (6)

Colorado State University Pueblo
 Community College of Denver
 Metropolitan State University of Denver
 Regis University
 Trinidad State College
 University of Northern Colorado

Connecticut (2)

Gateway Community College
 Norwalk Community College

Florida (12)

Ana G. Mendez University
 Broward College
 Florida Atlantic University
 Florida International University
 Hillsborough Community College
 Indian River State College
 Miami Dade College
 Nova Southeastern University
 Palm Beach State College
 Seminole State College of Florida
 University of Central Florida
 Valencia College

Georgia (2)

Dalton State College
 Lanier Technical College

Idaho (1)

College of Southern Idaho

Illinois (6)

City Colleges of Chicago—Richard J Daley College
 College of Lake County
 Dominican University
 Northeastern Illinois University
 Triton College
 University of Illinois Chicago

Kansas (1)

Seward County Community College

Nevada (4)

College of Southern Nevada
 Nevada State College
 Truckee Meadows Community College
 University of Nevada—Las Vegas

New Jersey (9)

Atlantic Cape Community College
 Bergen Community College
 Hudson County Community College
 Kean University
 Middlesex College
 Montclair State University
 New Jersey Institute of Technology
 Passaic County Community College
 William Paterson University of New Jersey

New Mexico (9)

Central New Mexico Community College
 Eastern New Mexico University—Main Campus

Eastern New Mexico University—Roswell Campus
 New Mexico Highlands University
 Northern New Mexico College
 Santa Fe Community College
 University of New Mexico—Los Alamos Campus
 University of New Mexico—Main Campus
 Western New Mexico University

New York (12)

CUNY City College
 CUNY Hostos Community College
 CUNY Hunter College
 CUNY LaGuardia Community College
 CUNY Lehman College
 CUNY Queens College
 CUNY Queensborough Community College
 Manhattan College
 Manhattanville College
 Mercy College
 Nassau Community College
 Suffolk County Community College

North Carolina (1)

Sampson Community College

Oregon (1)

Chemeketa Community College

Puerto Rico (20)

Dewey University—Juana Díaz
 Instituto Tecnológico de Puerto Rico—Recinto de Manatí
 Inter American University of Puerto Rico—Aguadilla
 Inter American University of Puerto Rico—Arecibo
 Inter American University of Puerto Rico—Barranquitas
 Inter American University of Puerto Rico—Bayamon
 Inter American University of Puerto Rico—Guayama
 Inter American University of Puerto Rico—Ponce
 Inter American University of Puerto Rico—San German
 Pontifical Catholic University of Puerto Rico—Arecibo
 Pontifical Catholic University of Puerto Rico—Ponce
 Universal Technology College of Puerto Rico
 Universidad Ana G. Mendez—Carolina Campus
 Universidad Ana G. Mendez—Cupey Campus
 Universidad Ana G. Mendez—Gurabo Campus
 University of Puerto Rico—Arecibo
 University of Puerto Rico—Humacao
 University of Puerto Rico—Medical Sciences
 University of Puerto Rico—Rio Piedras
 University of Puerto Rico—Utuado

Rhode Island (1)

Rhode Island College

Tennessee (1)

Southern Adventist University

Texas (35)

Amarillo College
 Angelo State University
 Austin College
 Austin Community College District
 Concordia University Texas
 Dallas College

Houston Community College
 Huston-Tillotson University
 Lee College
 Lone Star College System
 Odessa College
 Palo Alto College
 Saint Edward's University
 Sam Houston State University
 South Plains College
 Southwest Texas Junior College
 Southwestern University
 St. Mary's University
 Sul Ross State University
 Tarrant County College District
 Texas A & M University-Corpus Christi
 Texas A & M University-Kingsville
 Texas State University
 Texas Woman's University
 The University of Texas at Arlington
 The University of Texas at Austin
 The University of Texas at El Paso
 The University of Texas at San Antonio
 The University of Texas Rio Grande Valley
 Tyler Junior College
 University of Houston
 University of Houston-Clear Lake
 University of North Texas
 University of the Incarnate Word
 Wayland Baptist University

Virginia (1)

Northern Virginia Community College

Washington (6)

Big Bend Community College
 Columbia Basin College
 Heritage University
 Perry Technical Institute
 Wenatchee Valley College
 Yakima Valley College

Done at Washington, DC, this day of
 October 1, 2024.

Dionne Toombs,

*Associate Director for Programs, National
 Institute of Food and Agriculture, U.S.
 Department of Agriculture.*

[FR Doc. 2024-23061 Filed 10-7-24; 8:45 am]

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DEPARTMENT OF ENERGY

10 CFR Part 430

[EERE-2014-BT-STD-0058]

RIN 1904-AF59

Energy Conservation Program: Energy Conservation Standards for Consumer Clothes Dryers

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Direct final rule; confirmation of effective and compliance dates; technical correction.

SUMMARY: The U.S. Department of Energy ("DOE") published a direct final rule to establish amended energy conservation standards for consumer clothes dryers in the **Federal Register**

on March 12, 2024. DOE has determined that the comments received in response to the direct final rule do not provide a reasonable basis for withdrawing the direct final rule. Therefore, DOE provides this document confirming the effective and compliance dates of those standards. This document also clarifies the introductory notes to the appendices for the consumer dryer test procedure to conform with the amended standards promulgated by direct final rule published on March 12, 2024.

DATES: The technical correction in this document is effective October 8, 2024. The effective date of July 10, 2024 for the direct final rule published on March 12, 2024 (89 FR 18164) is confirmed. Compliance with the standards established in the direct final rule will be required on March 1, 2028.

ADDRESSES: The docket for this rulemaking, which includes **Federal Register** notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at www.regulations.gov. All documents in the docket are listed in the www.regulations.gov index. However, not all documents listed in the index may be publicly available, such as information that is exempt from public disclosure.

The docket web page can be found at www.regulations.gov/docket/EERE-2014-BT-STD-0058. The docket web page contains instructions on how to access all documents, including public comments, in the docket.

For further information on how to submit a comment or review other public comments and the docket, contact the Appliance and Equipment Standards Program staff at (202) 287-1445 or by email: ApplianceStandardsQuestions@ee.doe.gov.

FOR FURTHER INFORMATION CONTACT:

Dr. Carl Shapiro, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE-5B, 1000 Independence Avenue SW, Washington, DC 20585-0121. Telephone: (202) 287-5649. Email: ApplianceStandardsQuestions@ee.doe.gov.

Mr. Uchechukwu "Emeka" Eze, U.S. Department of Energy, Office of the General Counsel, GC-33, 1000 Independence Avenue SW, Washington, DC 20585-0121. Telephone: (240) 961-8879. Email: uchechukwu.eze@hq.doe.gov.

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I. Authority

The Energy Policy and Conservation Act, Public Law 94-163, as amended ("EPCA"),¹ authorizes DOE to issue a direct final rule establishing an energy conservation standard for a product on receipt of a statement submitted jointly by interested persons that are fairly representative of relevant points of view (including representatives of manufacturers of covered products, States, and efficiency advocates), as determined by the Secretary of Energy ("Secretary"), that contains recommendations with respect to an energy or water conservation standard that are in accordance with the provisions of 42 U.S.C. 6295(o) or 42 U.S.C. 6313(a)(6)(B), as applicable. (42 U.S.C. 6295(p)(4))

The direct final rule must be published simultaneously with a notice of proposed rulemaking ("NOPR") that proposes an energy or water conservation standard that is identical to the standard established in the direct final rule, and DOE must provide a public comment period of at least 110 days on this proposal. (42 U.S.C. 6295(p)(4)(A)-(B)) Not later than 120 days after issuance of the direct final rule, DOE shall withdraw the direct final rule if: (1) DOE receives one or more adverse public comments relating to the direct final rule or any alternative joint recommendation; and (2) based on the rulemaking record relating to the direct final rule, DOE determines that such adverse public comments or alternative joint recommendation may provide a reasonable basis for withdrawing the direct final rule. (42 U.S.C. 6295(p)(4)(C)) If DOE makes such

¹ All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116-260 (Dec. 27, 2020), which reflect the last statutory amendments that impact Parts A and A-1 of EPCA.

a determination, DOE must proceed with the NOPR published simultaneously with the direct final rule and publish in the **Federal Register** the reasons why the direct final rule was withdrawn. (*Id.*)

After review of comments received, DOE has determined that it did receive adverse comments on the direct final rule. However, based on the rulemaking record, the comments did not provide a reasonable basis for withdrawing the direct final rule under the provisions in 42 U.S.C. 6295(p)(4)(C). As such, DOE did not withdraw this direct final rule and the direct final rule remains effective. Although not required under EPCA, where DOE does not withdraw a direct final rule, DOE typically publishes a summary of the comments received during the 110-day comment period and its responses to those comments. This document contains such a summary, as well as DOE's responses to the comments.

II. Consumer Clothes Dryers Direct Final Rule

A. Background

In a direct final rule published on April 21, 2011, ("April 2011 Direct

Final Rule"), DOE prescribed the current energy conservation standards for consumer clothes dryers manufactured on or after January 1, 2015. 76 FR 22454.² These standards are set forth in DOE's regulations at title 10 of the Code of Federal Regulations ("CFR") section 430.32(h)(3).

DOE's current energy conservation standards for consumer clothes dryers are expressed in terms of combined energy factor ("CEF"), measured in pounds per kilowatt-hour ("lb/kWh"). To demonstrate compliance with the current energy conservation standards, manufacturers must use either the test procedure provided at 10 CFR part 430, subpart B, appendix D1 ("appendix D1") or the test procedure provided at 10 CFR part 430, subpart B, appendix D2 ("appendix D2"). Appendix D1 tests timed drying cycles, and accounts for clothes dryers with automatic termination controls by applying a higher field use factor to units that have this feature. Appendix D2 tests "normal" automatic termination cycles and more accurately measures the effects of automatic cycle termination.

On August 23, 2022, DOE published a NOPR ("August 2022 NOPR")

proposing to establish amended standards for consumer clothes dryers expressed in terms of CEF as determined in accordance with the appendix D2 test procedure (denoted as CEF_{D2}). 87 FR 51734.

On September 25, 2023, DOE received a joint statement ("Joint Agreement") recommending standards for consumer clothes dryers that was submitted by groups representing manufacturers, energy and environmental advocates, consumer groups, and a utility.³ In addition to the recommended standards for consumer clothes dryers, the Joint Agreement also included separate recommendations for several other covered products.⁴ The amended standard levels recommended in the Joint Agreement for consumer clothes dryers are presented in table II.1. Details of the Joint Agreement recommendations for other products are provided in the Joint Agreement posted in the docket for this rulemaking.⁵

TABLE II.1—RECOMMENDED AMENDED ENERGY CONSERVATION STANDARDS FOR CONSUMER CLOTHES DRYERS

Product class	Minimum CEF _{D2} (lb/kWh)	Compliance date
Electric, Standard (4.4 cubic feet ("ft ³ ") or greater capacity)	3.93	March 1, 2028.
Electric, Compact (120 volts ("V")) (less than 4.4 ft ³ capacity)	4.33	
Vented Electric, Compact (240V) (less than 4.4 ft ³ capacity)	3.57	
Vented Gas, Standard (4.4 ft ³ or greater capacity)	3.48	
Vented Gas, Compact (less than 4.4 ft ³ capacity)	2.02	
Ventless Electric, Compact (240V) (less than 4.4 ft ³ capacity)	2.68	
Ventless Electric, Combination Washer-Dryer	2.33	

After carefully considering the recommended energy conservation standards for consumer clothes dryers in the Joint Agreement, DOE determined that these recommendations were in accordance with the statutory requirements of 42 U.S.C. 6295(p)(4) for the issuance of a direct final rule and published a direct final rule on March 12, 2024 ("March 2024 Direct Final Rule"). 89 FR 18164. DOE evaluated

whether the Joint Agreement satisfies 42 U.S.C. 6295(o), as applicable, and found that the recommended standard levels would result in significant energy savings and are technologically feasible and economically justified. *Id.* at 89 FR 18230–18240. Accordingly, DOE adopted the recommended efficiency levels for consumer clothes dryers as the amended standard levels in the March 2024 Direct Final Rule. *Id.*

The standards adopted in the March 2024 Direct Final Rule apply to product classes listed in table II.2 and that are manufactured in, or imported into, the United States starting on March 1, 2028. The March 2024 Direct Final Rule provides a detailed discussion of DOE's analysis of the benefits and burdens of the new and amended standards pursuant to the criteria set forth in EPCA. *Id.* at 89 FR 18230–18240.

² DOE published a confirmation of effective date and compliance date for the direct final rule on August 24, 2011. 76 FR 52854.

³ The signatories to the Joint Agreement include AHAM, American Council for an Energy-Efficient Economy, Alliance for Water Efficiency, Appliance Standards Awareness Project, Consumer Federation of America, Consumer Reports, Earthjustice, National Consumer Law Center, Natural Resources Defense Council, Northwest Energy Efficiency Alliance, and Pacific Gas and Electric Company. Members of AHAM's Major Appliance Division that

make the affected products include: Alliance Laundry Systems, LLC; Asko Appliances AB; Beko U.S. Inc.; Brown Stove Works, Inc.; BSH Home Appliances Corporation; Danby Products, Ltd.; Electrolux Home Products, Inc.; Elicamex S.A. de C.V.; Faber; Fotile America; GE Appliances, a Haier Company; L'Atelier Paris Haute Design LLC; LG Electronics; Liebherr USA, Co.; Midea America Corp.; Miele, Inc.; Panasonic Appliances Refrigeration Systems (PAPRSA) Corporation of America; Perlick Corporation; Samsung Electronics America Inc; Sharp Electronics Corporation; Smeg

S.p.A; Sub-Zero Group, Inc.; The Middleby Corporation; U-Line Corporation; Viking Range, LLC; and Whirlpool Corporation.

⁴ The Joint Agreement contained recommendations for six covered products: refrigerators, refrigerator-freezers, and freezers; clothes washers; clothes dryers; dishwashers; cooking products; and miscellaneous refrigeration products.

⁵ The Joint Agreement available in the docket at www.regulations.gov/comment/EERE-2014-BT-STD-0058-0055.

TABLE II.2—AMENDED ENERGY CONSERVATION STANDARDS FOR CONSUMER CLOTHES DRYERS
[Compliance starting March 1, 2028]

Product class	Minimum CEFD ₂ (lb/kWh)
(i) Electric, Standard (4.4 cubic feet (“ft ³ ”) or greater capacity) *	3.93
(ii) Electric, Compact (120 volts (“V”)) (less than 4.4 ft ³ capacity)	4.33
(iii) Vented Electric, Compact (240V) (less than 4.4 ft ³ capacity)	3.57
(iv) Vented Gas, Standard (4.4 ft ³ or greater capacity) **	3.48
(v) Vented Gas, Compact (less than 4.4 ft ³ capacity)	2.02
(vi) Ventless Electric, Compact (240V) (less than 4.4 ft ³ capacity)	2.68
(vii) Ventless Electric, Combination Washer-Dryer	2.33

*The energy conservation standards in this product class do not apply to Vented Electric, Standard clothes dryers with a cycle time of less than 30 minutes, when tested according to appendix D2 in subpart B of this part.

**The energy conservation standards in this product class do not apply to Vented Gas, Standard clothes dryers with a cycle time of less than 30 minutes, when tested according to appendix D2 in subpart B of this part.

As required by EPCA, DOE also simultaneously published a NOPR proposing the identical standard levels contained in the March 2024 Direct Final Rule. 89 FR 18244. DOE considered whether any adverse comment received during the 110-day comment period following the publication of the March 2024 Direct Final Rule provided a reasonable basis for withdrawal of the direct final rule

under the provisions in 42 U.S.C. 6295(p)(4)(C).

III. Comments on the Direct Final Rule

As discussed in section I of this document, not later than 120 days after publication of a direct final rule, DOE shall withdraw the direct final rule if: (1) DOE receives one or more adverse public comments relating to the direct final rule or any alternative joint recommendation; and (2) based on the

rulemaking record relating to the direct final rule, DOE determines that such adverse public comments or alternative joint recommendation may provide a reasonable basis for withdrawing the direct final rule. (42 U.S.C. 6295(p)(4)(C)(i))

DOE received comments in response to the March 2024 Direct Final Rule from the interested parties listed in table III.1.

TABLE III.1—LIST OF COMMENTERS WITH WRITTEN SUBMISSIONS IN RESPONSE TO THE MARCH 2024 DIRECT FINAL RULE

Commenter(s)	Abbreviation	Comment No. in the docket	Commenter type
Casey Smith	Smith	65	Individual.
Representative Stephanie Bice	Rep. Bice	67	Federal Government Official.
New York State Energy Research and Development Authority and California Energy Commission.	NYSERDA and CEC	68	State Agencies.
Association of Home Appliance Manufacturers	AHAM	69	Trade Association.
The Attorney General of Montana	AG of MT	70	State Government Official.
The Consumer Federation of America, Consumer Reports, Green Energy Consumers Alliance, National Consumer Law Center, and U.S. Public Interest Research Group.	CFA <i>et al</i>	71	Advocacy Organizations.
Appliance Standards Awareness Project, American Council for an Energy-Efficient Economy, Consumer Federation of America, Consumer Reports, Earthjustice, National Consumer Law Center, Natural Resources Defense Council, Northwest Energy Efficiency Alliance, and Pacific Gas and Electric Company.	ASAP <i>et al</i>	72	Advocacy Organizations.
The Attorneys General of the States of Tennessee, Nebraska, Florida, Arkansas, Georgia, Louisiana, Montana, Indiana, Kentucky, Texas, Iowa, South Carolina, Idaho, West Virginia, Missouri, New Hampshire, South Dakota, Alabama, Kansas, Utah, Mississippi.	AGs of TN <i>et al</i>	73	State Government Officials.

A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.⁶ The following sections discuss the substantive comments DOE

⁶ The parenthetical reference provides a reference for information located in the docket of DOE's rulemaking to develop energy conservation standards for consumer clothes dryers. (Docket No. EERE-2014-BT-STD-0058, which is maintained at: www.regulations.gov). The references are arranged as follows: (commenter name, comment docket ID number at page of that document).

received on the March 2024 Direct Final Rule as well as DOE's determination that the comments do not provide a reasonable basis for withdrawal of the direct final rule.

A. General Comments

NYSERDA and CEC reiterated their sustained support for the recommendations issued in their

October 5, 2023 letter.⁷ (NYSERDA and CEC, No. 68 at p. 1)

Smith supported DOE's proposal to apply energy conservation standards to consumer clothes dryers and to periodically determine whether stricter standards are feasible. Smith commented that the benefits of the March 2024 Direct Final Rule outweigh

⁷ NYSERDA and CEC letter available at www.regulations.gov/comment/EERE-2014-BT-STD-0058-0056.

manufacturer concerns regarding initial costs. (Smith, No. 65 at p. 1)

AHAM and ASAP *et al.* supported the March 2024 Direct Final Rule for consumer clothes dryers because it establishes standards that are consistent with recommendations submitted in the Joint Agreement. (AHAM, No. 69 at p. 1, ASAP *et al.* No. 72 at pp. 1–2) AHAM commented that it finds DOE has satisfied all EPCA criteria for issuing the March 2024 Direct Final Rule because the recommended energy conservation standards were designed by the Joint Stakeholders (including manufacturers of various sizes as well as consumer, environmental, and efficiency advocacy groups; a utility; and some States) to achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified in accordance with the provisions of 42 U.S.C. 6295(o); and because DOE issued the March 2024 Direct Final Rule together with a proposed rule identical to the standard established in the March 2024 Direct Final Rule and allowed 110 days for public comment, which is consistent with EPCA requirements. AHAM agreed with DOE's determination that the amended energy conservation standards levels in the March 2024 Direct Final Rule can be reached through technology options identified in the March 2024 Direct Final Rule, or through other pathways, and that under the March 2024 Direct Final Rule, about half of existing consumer clothes dryer shipments already meet the amended conservation standards. AHAM added that because the March 2024 Direct Final Rule levels for many product classes are equivalent to current ENERGY STAR levels, there are a wide range of these products currently on the market. (AHAM, No. 69 at pp. 4, 5–6)

AHAM further commented that DOE satisfactorily responded to AHAM's comments and concerns regarding clothes dryer performance, product classes, consideration of low-income consumers, the new Energy Information Administration's ("EIA's") Residential Energy Consumption Survey of 2020 ("RECS 2020") data, supply chain challenges, and harmonization of compliance dates for other laundry products. AHAM stated that the compliance timeline reduces the cumulative regulatory burden of this rulemaking and those for other major appliances. (AHAM, No. 69 at pp. 2–3, 6–7)

CFA *et al.* supported the March 2024 Direct Final Rule, which they noted is one of many completed and pending efficiency standards that will together significantly reduce consumer costs and

climate pollution, as well as reduce emissions of nitrogen oxides, which cause health issues. (CFA *et al.*, No. 71 at p. 1)

Rep. Bice submitted a comment in opposition to the standards adopted in the March 2024 Direct Final Rule. (Rep. Bice, No. 67 at p. 1)

The AGs of TN *et al.* asserted that the March 2024 Direct Final Rule over-regulates American households and requested that DOE reconsider it. (AGs of TN *et al.*, No. 73 at p. 1) The AG of MT expressed agreement with the AGs of TN *et al.*'s comments. (AG of MT, No. 70, p. 1)

As discussed in more detail below, DOE has determined that these comments do not provide a reasonable basis to withdraw the March 2024 Direct Final Rule.

B. Anti-Backsliding

EPCA, as codified, contains what is known as an "anti-backsliding" provision, which prevents the Secretary from prescribing any amended standard that either increases the maximum allowable energy use or decreases the minimum required energy efficiency of a covered product. (42 U.S.C. 6295(o)(1))

The AG of MT commented that the fact the Joint Agreement is contingent upon other parts being implemented conflicts with the anti-backsliding provision of EPCA. (AG of MT, No. 70 at pp. 1–2). The AG of MT further implied that DOE's efficiency standards may violate the anti-backsliding prohibition in the EPCA when the full fuel cycle costs of shorter lifespans are taken into account. (*Id.* at p. 4)

The AG of MT stated that DOE must consider energy efficiency over the entire product lifecycle. The AG of MT agreed with DOE's statement that conscientious energy use is more complicated than increasing efficiency alone, and the AG of MT referenced documents with quotes from DOE officials testifying to this sentiment. (AG of MT, No. 70 at p. 3)

As discussed previously, DOE may not prescribe an amended standard that increases the maximum allowable energy use or decreases the energy efficiency of a covered product. Further, EPCA defines the term "energy use" to mean the quantity of energy directly consumed by a consumer product at point of use, determined in accordance with test procedures under 42 U.S.C. 6293. (42 U.S.C. 6291(4)) EPCA similarly defines "energy efficiency" to mean the ratio of the useful output of services from a consumer product to the energy use [as that term is defined] of such product, determined in accordance

with test procedures under 42 U.S.C. 6293. (42 U.S.C. 6291(5)) Neither the energy use nor the energy efficiency of a product, as those terms are defined in EPCA, or measured under the applicable test procedure, is dependent upon the lifespan of the product or the energy costs upstream from the point of use, *i.e.*, full fuel cycle costs. As a result, product lifespan has no effect on whether an amended standard violates the anti-backsliding provision in 42 U.S.C. 6295(o)(1).

Additionally, DOE addressed its approach to implementing the Joint Agreement in the March 2024 Direct Final Rule. As discussed there, the Joint Agreement was contingent upon DOE initiating rulemaking processes to adopt all of the recommended standards. In other words, DOE could not pick and choose which recommendations in the Joint Agreement to implement. *See* 89 FR 18164, 18173. However, the Joint Agreement also acknowledged that DOE may evaluate and implement each of the package of recommended standard in separate rulemakings under the applicable statutory criteria. As described, DOE's adoption of the recommended standards conforms with the anti-backsliding provision in 42 U.S.C. 6295(o)(1).

For the aforementioned reason, DOE has determined that the comments provided by the AG of MT does not provide a reasonable basis for withdrawal of the March 2024 Direct Final Rule.

C. Economic Justification

DOE must follow specific statutory criteria for prescribing new or amended standards for covered products, including consumer clothes dryers. Any new or amended standard for a covered product must be designed to achieve the maximum improvement in energy efficiency that the Secretary determines is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) In deciding whether a proposed standard is economically justified, DOE must determine whether the benefits of the standard exceed its burdens. (42 U.S.C. 6295(o)(2)(B)(i)) DOE must make this determination after receiving comments on the proposed standard, and by considering, to the greatest extent practicable, the following seven statutory factors:

(1) The economic impact of the standard on manufacturers and consumers of the products subject to the standard;

(2) The savings in operating costs throughout the estimated average life of the covered products in the type (or class) compared to any increase in the

price, initial charges, or maintenance expenses for the covered products that are likely to result from the standard;

(3) The total projected amount of energy (or as applicable, water) savings likely to result directly from the standard;

(4) Any lessening of the utility or the performance of the covered products likely to result from the standard;

(5) The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the standard;

(6) The need for national energy and water conservation; and

(7) Other factors the Secretary considers relevant.

(42 U.S.C. 6295(o)(2)(B)(i)(I)–(VII))

DOE received several comments on its determination of economic justification under the statutory criteria.

1. Manufacturer and Consumer Impacts

Rep. Bice asserted that increased standards will lead to increased production costs for manufacturers, which will subsequently lead to increased costs to consumers. Rep. Bice added that the adopted standards will limit consumer choice, drive up prices, and impose onerous regulations on American manufacturers, many of whom are small businesses. (Rep. Bice, No. 67, p. 1)

The AGs of TN *et al.* commented that the March 2024 Direct Final Rule does not weigh heavily enough the appliance cost increase that the rule will cause and that will be borne by American consumers. (AGs of TN *et al.*, No. 73 at p. 2) The AGs of TN *et al.* commented that DOE expects great savings over the life cycle of new, energy-efficient clothes dryers while failing to take into account the upfront costs to consumers and the preferences of lower socioeconomic buyers. The AGs of TN *et al.* commented that prior to the Joint Agreement, Whirlpool and AHAM expressed concern about the affordability of clothes dryers for low-income households and the fact that for most consumers, purchase cost is the leading factor in their purchase decision. The AGs of TN *et al.* added that many will opt to repair old machines rather than purchasing more expensive newer models. (*Id.* at pp. 3–4)

DOE considered the impacts to manufacturers, including the potential increase in manufacturing costs, in the manufacturing impact analysis in the March 2024 Direct Final Rule. 89 FR 18164, 18199–18202, 18217–18224. DOE estimates that approximately 48 percent of annual shipments currently meet the adopted standard levels. *Id.* at

89 FR 18236–18237. DOE notes that it did not identify any small business manufacturers of consumer clothes dryers. 89 FR 18244, 18258–18259. In the March 2024 Direct Final Rule, the life-cycle cost (“LCC”) analysis calculated the distribution of impacts across a nationally representative sample of U.S. households. As demonstrated by the LCC analysis, at the adopted standard, the LCC savings is positive for nearly all consumers; the fraction of consumers experiencing a net LCC cost is less than 2 percent; the fraction of low-income households and senior-only households experiencing a net LCC cost is approximately 1.5 percent and 2.5 percent, respectively. *Id.* Therefore, the March 2024 Direct Final Rule did consider the economic impact of the standard on the manufacturers and on the consumers of the products subject to such standard (42 U.S.C. 4296(o)(2)(B)(i)(I)), and DOE has determined that the comments provided by the AGs of TN *et al.* and Rep. Bice do not provide a reasonable basis for withdrawal of the March 2024 Direct Final Rule.

AHAM commented that under the standards adopted in the March 2024 Direct Final Rule, only 2 percent of consumers would experience a net cost. AHAM commented that on average, consumers will save \$223 with a payback period of 1.2 years, across all product classes. (*Id.*)

ASAP *et al.* commented that the amended standards will particularly benefit low-income consumers, who spend three times more of their income on energy costs compared to non-low-income households. ASAP *et al.* commented that the standards will also benefit renters, whose landlords might not otherwise purchase energy-saving clothes dryers. (ASAP *et al.*, No. 72 at p. 2)

CFA *et al.* commented that clothes dryers are one of the biggest energy users in many homes, with today’s least efficient models consuming nearly one-tenth of the average home’s total electricity use. CFA *et al.* also commented that renters, who are disproportionately low-income households, are often unable to choose their own clothes dryer yet pay the utility bills—a problem more pronounced in multifamily housing, which is predominantly occupied by renters. CFA *et al.* further commented that the standards adopted in the March 2024 Direct Final Rule will reduce energy use by 40 percent relative to the least efficient clothes dryers sold today, benefiting homeowners and renters alike; for a household replacing an inefficient electric clothes dryer, the

new standards will provide annual electricity bill savings of \$44 on average. CFA *et al.* noted that the standards will also help ensure that clothes dryers don’t over-dry clothes, which can shrink or otherwise damage them. CFA *et al.* added that for low-income households, the average payback period for electric clothes dryers, which make up about 80 percent of sales, is just four months; for gas clothes dryers, the average payback period is one year. (CFA *et al.*, No. 71 at p. 1)

2. Energy Price Trends

The AG of MT stated that DOE’s reliance on 2022 data for energy prices and the EIA’s *Annual Energy Outlook 2023* (“*AEO2023*”) for pricing trends is faulty due to Federal rulemakings being issued that will force existing generating capacity offline, spike electricity demand, and decrease fossil fuel supply, as illustrated with several documents attached to the comment. (AG of MT, No. 70 at p. 5)

DOE contends that *AEO2023* remains the best available source for projections of future energy price trends based on adopted energy policies. DOE also performed sensitivity analyses using alternate *AEO2023* growth scenarios with low and high energy prices relative to the reference scenario in the March 2024 Direct Final Rule to assess the impact of alternative energy price projections. 89 FR 18164, 18198. The results of these scenarios are available in appendix 10C of the March 2024 Direct Final Rule technical support document (“TSD”) and show that consumers of consumer clothes dryers would still experience positive cumulative net present value (“NPV”) even when considering lower and higher energy prices.

Therefore, the March 2024 Direct Final Rule did take into account energy price variability in its analysis, and DOE has determined that the comment provided by the AG of MT does not provide a reasonable basis for withdrawal of the March 2024 Direct Final Rule.

3. Consumer Behavior

The AG of MT stated that DOE acknowledges but disregards consumer preference and assumes consumers are ignorant. The AG of MT attached studies demonstrating consumer preference for product lifetime over energy consumption, and the AG of MT commented that these longer-life appliances may use less energy over the entire life cycle and be lower cost to the consumer, yet DOE did not address those issues. (AG of MT, No. 70, p. 2)

DOE did not disregard consumer preference but rather noted in the March 2024 Direct Final Rule that the economics literature provides a wide-ranging discussion of how consumers trade off up-front costs and energy savings in the absence of government intervention. 89 FR 18164, 18231. Much of this literature explains why consumers appear to undervalue energy efficiency improvements. There is evidence that consumers undervalue future energy savings as a result of (1) a lack of information; (2) a lack of sufficient salience of the long-term or aggregate benefits; (3) a lack of sufficient savings to warrant delaying or altering purchases; (4) excessive focus on the short term, in the form of inconsistent weighting of future energy cost savings relative to available returns on other investments; (5) computational or other difficulties associated with the evaluation of relevant trade-offs; and (6) a divergence in incentives (for example, between renters and owners, or builders and purchasers). *Id.* Having less-than-perfect foresight and a high degree of uncertainty about the future, consumers may trade off these types of investments at a higher-than-expected rate between current consumption and uncertain future energy cost savings. *Id.*

Potential changes in the benefits and costs associated with a standard due to changes in consumer purchase decisions were included in the analysis for the March 2024 Direct Final Rule in two ways. *Id.* First, if consumers forgo the purchase of a product in the standards case, as estimated based on price elasticity related to empirical data on appliances, this decreases sales for product manufacturers, and the impact on manufacturers attributed to lost revenue is included in the manufacturer impact analysis. *Id.* Second, DOE accounts for energy savings attributable only to products actually used by consumers in the standards case; if a standard decreases the number of products purchased by consumers, leading to repair existing clothes dryers or purchase of used ones, this decreases the potential energy savings from an energy conservation standard.

4. Product Reliability

Further, the AG of MT stated that the reliability of products affected by the rulemaking will decrease due to complexity increases, which the commenter asserted is supported by engineering facts illustrated in a document attached to their comment, yet DOE does not address this issue. The AG of MT also commented that complexity increases will lead to less economic viability of repair, which is

not reflected in DOE's assumption that the rulemaking will have no impact on lifespan. The AG of MT commented DOE disregards the fact that reliability can be increased by lightening the electrical, mechanical, thermal, and other conditions of operation of the components, which tends to decrease energy efficiency but results in less repair downtime and longer times before replacement and, therefore, decreased costs, as illustrated in attached documents. (AG of MT, No. 70, pp. 3–5)

The AG of MT referenced a previous comment made by Whirlpool⁸ in which Whirlpool asserted that consumers may continue replacing cheaper components well into the life of an electromechanically controlled clothes dryer, extending its life, while they may not decide to make a more expensive electronic component repair, like a user interface assembly, after several years of ownership of an electronic control clothes dryer. The AG of MT reiterated Whirlpool's statement that DOE's previously proposed standards may effectively shorten the useful life of a consumer clothes dryer because of this repair-versus-replacement calculus, resulting in loss of time-saving benefits of clothes dryer ownership. (*Id.* at p. 4) The AG of MT commented that DOE's use of a single lifespan in its analysis for this rulemaking was in error. (*Id.* at p.3)

ASAP *et al.* commented that they do not expect the standards in the March 2024 Direct Final Rule to have any impact on product reliability because the amended standards can be met with simple design changes that have already been incorporated in many models on the market today. ASAP *et al.* presented a figure of historical RECS data showing that the distribution of clothes dryer age remained largely unchanged between 2005 and 2020 as clothes dryer efficiency improved. (ASAP *et al.*, No. 72 at pp. 3–4)

AHAM commented that the recommended standards are economically justified as required by 42 U.S.C. 6295(o)(2)(B)(i)(I) and will not result in lessening of utility, reliability, performance or availability of the clothes dryers considered under 42 U.S.C. 6295(o)(2)(B)(i)(IV).

In contrast to the comment from the AG of MT and as noted in the March 2024 Direct Final Rule, DOE's review of clothes dryer product reliability information provides no indication that higher-efficiency products are less reliable at the adopted standard levels—*i.e.*, ENERGY STAR efficiency level products relative to baseline products.

Hence, notwithstanding theoretical conjecture that higher-efficiency products may have poor reliability based on simplified textbook models, no real-world evidence or data related to the technologies used at the adopted standard levels can be found clearly supporting such a correlation. The AG of MT did not specify how the referenced documents on network node analysis and reliability theory correspond to the technologies used at the adopted standard levels for consumer clothes dryers. In the absence of data specific to the technologies used in clothes dryer products, DOE has no practical basis to model the theoretical concern from the AG of MT at the adopted standard levels.

As described in the March 2024 Direct Final Rule, DOE did not use a single lifespan in its analysis for the consumer clothes dryer rulemaking. Instead, DOE assigned a range of lifespan from 1 to 30 years, based on the Weibull lifetime distribution. DOE further notes that the lifetime distribution used in the March 2024 Direct Final Rule is based on actual lifetime values in the field, which were developed from historical shipments data and surveys. DOE observed that from the 2015 RECS to the 2020 RECS, there was a 6 percent increase in the number of consumer clothes dryers retiring before reaching 4 years of age, and an additional 1 percent lasting beyond 15 years. However, DOE did not find that the average lifetime for consumer clothes dryers has significantly changed, as the increase in the Weibull distribution is reflected in both early appliance retirement and extended use beyond 15 years. Therefore, the estimated average lifetime for consumer clothes dryers remains at 14 years. 89 FR 18164, 18191. In addition, DOE is unaware of data that suggests a different lifetime associated with the technology options considered in the March 2024 Direct Final Rule, and no such data was provided by stakeholders.

In response to the March 2024 Direct Final Rule, AHAM commented that the adopted standard will not impact the reliability of products at the adopted level, and it further stated that the standard levels are achievable by technology readily available on the market. (AHAM, No. 69 at p. 5)

As discussed in the March 2024 Direct Final Rule, DOE did take into account product reliability, lifetimes, and cost of repair when considering the LCC of more efficient products when supported by available data. *See* 89 FR 18164, 18190. Therefore, the March 2024 Direct Final Rule did take into account consumer purchase decisions in

⁸ *See* Whirlpool, No. 53 at pp. 8–9.

its analysis, and DOE has determined that the comment provided by the AG of MT does not provide a reasonable basis for withdrawal of the March 2024 Direct Final Rule.

5. SCC-GHG Analysis

The AG of MT commented that greenhouse gas (“GHG”) emissions and climate change impacts should not be part of EPCA rulemakings, but given their inclusion, DOE must consider them throughout the entire life cycle of the product, including manufacturing and potential reductions in lifespan due to increased complexity. (AG of MT, No. 70 at p. 6) The AG of MT also referred to a statement made to the U.S. Senate Subcommittee on Energy to indicate that 40 to 60 percent of the carbon footprint for many consumer products can be attributed to the supply chain.⁹

However, the McKinsey report, which is the primary source for the statement made to the U.S. Subcommittee on Energy, is only referring to the manufacturing company’s energy and carbon footprint that can reside upstream in its supply chain and does not include the energy and emissions associated with the usage phase of the appliance life cycle, which represents more than 90 percent of the total for large appliances.¹⁰ As such, the energy and carbon footprint associated with supply chain likely accounts for approximately 4 to 6 percent of the overall carbon footprint of a product. In the March 2024 Direct Final Rule, DOE accounted for the environmental and public health benefits associated with the more efficient use of energy, including those connected to global climate change, as they are important to take into account when considering the need for national energy conservation under EPCA. (See 42 U.S.C. 6295(o)(2)(B)(i)(IV)) 89 FR 18164, 18228–18230. This analysis focused on the estimated reduced emissions expected to result during the lifetime of consumer clothes dryers shipped during the projection period. *Id.*

The AG of MT stated that the Interagency Working Group’s (“IWG’s”) social cost of GHG (“SC-GHG”) based on global impacts is inconsistent with EPCA’s requirements for standards to consider economic implications to U.S. consumers. The AG of MT claimed that DOE erroneously appears to assume that

all benefits accrue to U.S. citizens, despite using global values. The AG of MT cited the case of *Louisiana v. Biden* to demonstrate questions related to the accuracy of the IWG’s SC-GHG estimates. (AG of MT, No. 70, p. 6)

First, as stated in the March 2024 Direct Final Rule, DOE determined that the rule was economically justified without accounting for the social cost of greenhouse gases. 89 FR 18164, 18232. DOE, however, reiterates its view that the environmental and public health benefits associated with more efficient use of energy, including those connected to global climate change, are important to take into account when considering the need for national energy conservation. (See 42 U.S.C. 6295(o)(2)(B)(i)(IV)) In addition, Executive Order 13563, which was reaffirmed on January 21, 2021, stated that each agency must, among other things, “select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity).” Regarding the use of global SC-GHG values, many climate impacts that affect the welfare of U.S. citizens and residents are better reflected by global measures of SC-GHG. In addition, assessing the benefits of U.S. GHG mitigation activities requires consideration of how those actions may affect mitigation activities by other countries, as those international mitigation actions will provide a benefit to U.S. citizens and residents by mitigating climate impacts that affect U.S. citizens and residents.

The AG of MT stated the monetized GHG benefits largely accrue centuries in the future, well beyond the rulemaking analysis period. Furthermore, the AG of MT stated that DOE improperly mixed discount rates in its cost-benefit analysis. (AG of MT, No. 70 at p. 6)

DOE’s March 2024 Direct Final Rule analysis considers the costs and benefits associated with 30 years of shipments of a covered product. Because a portion of products shipped within this 30-year period continue to operate beyond 30 years, DOE accounts for energy cost savings and reductions in emissions until all products shipped within the 30-year period are retired. 89 FR 18164, 19167, 19169. In the case of carbon dioxide emissions, which remain in the atmosphere and contribute to climate change for many decades, the benefits of reductions in emissions likewise occur over a lengthy period; to not include such benefits would be inappropriate. *Id.*

With regards to discount rates used, the IWG found that the use of the social rate of return on capital (7 percent under current Office of Management and Budget Circular A–4 guidance) to discount the future benefits of reducing GHG emissions inappropriately underestimates the impacts of climate change for the purposes of estimating the SC-GHG. Consistent with the findings of the National Academies and the economic literature, the IWG continued to conclude that the consumption rate of interest is the theoretically appropriate discount rate in an intergenerational context and recommended that discount rate uncertainty and relevant aspects of intergenerational ethical considerations be accounted for in selecting future discount rates. With regards to “mixing discount rates” (which DOE understands to refer to use of different discount rates for monetizing climate-related benefits and for estimating the NPV consumer benefits), DOE consulted the National Academies’ 2017 recommendations on how SC-GHG estimates can “be combined in Regulatory Impact Analyses (“RIAs”) with other cost and benefits estimates that may use different discount rates.” The National Academies reviewed several options, including “presenting all discount rate combinations of other costs and benefits with [SC-GHG] estimates.” 89 FR 18164, 18206.¹¹ DOE’s approach is consistent with the National Academies’ recommendations and is not improper.

Therefore, DOE has determined that the comments provided by the AG of MT does not provide a reasonable basis for withdrawal of the March 2024 Direct Final Rule.

¹¹ Following the issuance of the March 2024 Direct Final Rule, DOE issued a rulemaking document in an unrelated matter in which it preliminarily determined that new, updated SC-GHG estimates promulgated in 2023 by EPA (2023 SC-GHG estimates) represent a significant improvement in estimating SC-GHG. See 89 FR 59692, 59700–59701. DOE preliminarily determined that the updated 2023 SC-GHG estimates reflect the best available scientific and analytical evidence and methodologies, are accordingly the most appropriate for DOE analyses, and best facilitate sound decision-making by substantially improving the transparency of the estimates and representations of uncertainty inherent in such estimates. *Id.* DOE welcomed comment on that preliminary determination. *Id.*

Because it issued the March 2024 Direct Final Rule prior to making that preliminary determination, DOE estimated the climate benefits of the standards adopted in this rule using the IWG’s SC-GHG estimates. As noted in the text, DOE’s decision to adopt the March 2024 Direct Final Rule’s standards did not depend on the cost of greenhouse gasses; nor would the decision change based on a revised estimate of the cost of greenhouse gasses.

⁹ See www.energy.senate.gov/services/files/3D26FA56-F102-9E9F-BEA4-52BB0085B19A.

¹⁰ Gonzalez, A., A. Chase, and N. Horowitz. 2012. “What We Know and Don’t Know about Embodied Energy and Greenhouse Gases for Electronics, Appliances, and Light Bulbs.” Energy Solutions and Natural Resources Defense Council. ACEEE Summer Study on Energy Efficiency in Buildings.

D. Unavailability of Performance Characteristics

EPCA specifies the Secretary may not prescribe an amended or new standard if interested persons have established by a preponderance of the evidence that the standard is likely to result in the unavailability in the United States in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the United States. (42 U.S.C. 6295(o)(4))

Rep. Bice asserted that the adopted standards will limit consumer choice. (Rep. Bice, No. 67 at p. 1). The AGs of TN *et al.* also commented that the adopted standards will limit consumer choice. (AGs of TN *et al.*, No. 73 at p. 9)

DOE's data demonstrates that manufacturers of consumer clothes dryers currently offer units that meet or exceed the adopted standards. As such, DOE determined the March 2024 Direct Final Rule would not result in the unavailability of products that are substantially the same as those currently available in the United States. 89 FR 18164, 18226–18227. Therefore, DOE has determined that the comments provided by Rep. Bice and the AGs of TN *et al.* do not provide a reasonable basis for withdrawal of the March 2024 Direct Final Rule.

ASAP *et al.* commented that the amended standards, combined with the new test procedure, will ensure that consumer clothes dryers adequately dry clothing and will not negatively impact performance. ASAP *et al.* added that consumer clothes dryers that already meet the new standards provide improved drying performance relative to less-efficient models, as demonstrated by Consumer Reports studies and test data. (ASAP *et al.*, No. 72 at pp. 2–3)

ASAP *et al.* noted that the amended standards will not preclude the use of electro-mechanical controls, allowing consumers a preferred user experience. (*Id.* at p. 3)

ASAP *et al.* noted that the amended standards will not require an increase in cycle time. ASAP *et al.* noted that there is no evidence that the frequency of running multiple clothes dryer cycles has increased over time or will increase in the future as a result of the amended standards. (*Id.*)

AHAM commented that it supported the energy conservation standards in the March 2024 Direct Final Rule because DOE's data demonstrate that when tested under the applicable test procedure for amended standards, there is no significant difference in cycle time

between clothes dryers in its data set that are less efficient than the amended standards and those that just meet the amended standard levels. AHAM cited as an example the difference in average cycle time of only about 2 minutes between electric standard clothes dryers in DOE's data set that are less efficient than AHAM's recommended standard and those that just meet its recommended standard level (with CEFs of 3.93 and 3.94, respectively). Thus, AHAM commented that it supported the energy conservation standards adopted in the March 2024 Direct Final Rule. (AHAM, No. 69 at pp. 1–2)

AHAM commented that the energy conservation standards adopted in the March 2024 Direct Final Rule will not result in significant lessening of utility, reliability, performance, or availability of the covered products as prohibited under the so-called “safe harbor” exception of 42 U.S.C. 6295(o)(2)(B)(IV). (*Id.* at pp. 4–5)

AHAM commented that the test procedure used to determine compliance with amended standards for consumer clothes dryers (*i.e.*, appendix D2) requires that clothes dryers meet a threshold for “final moisture content” to be certified as compliant—the final moisture content requirement ensures that compliant clothes dryers will adequately dry clothes. AHAM added that more than 400 electric clothes dryer models and nearly 200 gas clothes dryer models meet the final moisture content threshold and are certified to the current ENERGY STAR specification, which is equivalent to AHAM's recommended standard levels and is based on appendix D2. AHAM therefore does not anticipate that the energy conservation standards recommended in the Joint Agreement and established in the March 2024 Direct Final Rule will negatively affect features or performance, including cycle time. (*Id.* at p. 5)

NYSERDA and CEC reiterated their support for the recommendations in the Joint Agreement and echoed the clarification regarding “short cycle” products made in the February 15, 2024 letter to DOE by ASAP and AHAM. This clarification specified that the recommendations in the Joint Agreement did not address “short cycle” products for clothes washers, clothes dryers, and dishwashers as so-called “short cycle” product classes did not exist at the time the recommendations were submitted to DOE and do not exist at this time.¹² This letter also highlighted that the

signatories to the Joint Agreement do not anticipate that amended standards will negatively affect features or performance, including cycle time. (NYSERDA and CEC, No. 68 at p. 1)

E. Stakeholder Representation

Under 42 U.S.C. 6295(p)(4), interested persons that are fairly representative of relevant points of view (including representatives of manufacturers of covered products, States, and efficiency advocates), as determined by DOE, may submit a joint recommendation to DOE for new or amended energy conservation standards.

The AGs of TN *et al.* questioned the expertise and relevancy of several advocacy groups who contributed to the Joint Agreement (*i.e.*, the Alliance for Water Efficiency, Earthjustice, the Northwest Energy Efficiency Alliance, the Natural Resources Defense Council, and the National Consumer Law Center). The AGs of TN *et al.* asserted that most of the advocacy groups have no expertise in setting energy efficiency standards for consumer clothes dryers, and failed to raise concerns related to the upfront cost of more efficient appliances to low-income households. (AGs of TN *et al.*, No. 73 at p. 3)

The AGs of TN *et al.* commented that 42 U.S.C. 6295(p)(4) requires a joint statement from “interested persons that are fairly representative of the relevant points of view,” and it must include “representatives of . . . States.” The AGs of TN *et al.* asserted that the Joint Agreement does not meet that standard, as very few States supported DOE's consumer clothes dryer regulations and were not signatories to the Joint Agreement. The AGs of TN *et al.* stated that interested persons should include more States, which are the direct representatives of consumers. The AGs of TN *et al.* added that State entities are direct purchasers of these appliances and thus will directly bear the burden of increased costs for appliances, and the March 2024 Direct Final Rule also preempts State procurement standards with less stringent energy-efficiency rules in contradiction of Federal law. (*Id.* at pp. 4–5)

The AG of MT agreed with the AGs of TN *et al.*'s concerns over the participants in the Joint Agreement underlying the March 2024 Direct Final Rule, along with their concerns that the group does not comply with EPCA. (AG of MT, No. 70 at pp. 1–2)

AHAM commented that the stakeholders who submitted the Joint Agreement are representative of a wide range of expert and relevant points of view—including manufacturers of various sizes representing nearly 100

¹² ASAP and AHAM letter available at www.regulations.gov/comment/EERE-2014-BT-STD-0058-0058.

percent of the market for consumer clothes dryers; consumer, environmental, and efficiency advocacy groups; a utility; and several States that participated in the negotiation discussions and filed comments in support of the agreement. AHAM concluded that the March 2024 Direct Final Rule benefits both the manufacturers and consumers that these organizations represent. (AHAM, No. 69 at pp. 3–4)

In response to the comments regarding whether the Joint Agreement was submitted by persons fairly representative of relevant points of view, DOE reiterates that 42 U.S.C. 6295(p)(4) states that if the criteria in 42 U.S.C. 6295(o) are met, the Secretary may issue a final rule that establishes an energy conservation standard “[o]n receipt of a statement that is submitted jointly by interested persons that are fairly representative of relevant points of view (including representatives of manufacturers of covered products, States, and efficiency advocates), as determined by the Secretary.” (42 U.S.C. 6295(p))

As stated in the March 2024 Direct Final Rule, DOE determined that this requirement was met. 89 FR 18164, 18174–18175. The Joint Agreement included a trade association, AHAM, which represents 11 manufacturers of the subject covered products—consumer clothes dryers. *Id.* The Joint Agreement also included environmental and energy-efficiency advocacy organizations, consumer advocacy organizations, and a gas and electric utility company. *Id.* Additionally, DOE received a letter in support of the Joint Agreement from the States of New York, California, and Massachusetts (*see* comment No. 56). *Id.* DOE also received a letter in support of the Joint Agreement from the gas and electric utility, San Diego Gas and Electric, and the electric utility, Southern California Edison (*see* comment No. 57). *Id.* Each of the listed categories of persons described in 42 U.S.C. 6295(p)(4) supported the Joint Agreement.

DOE has ample authority to accept a joint statement in these circumstances. EPCA does not require that the Joint Agreement be representative of every point of view. Nor does it require that a statement be submitted by all interested persons. Rather, it requires a statement from a sufficient number and diversity of “interested persons” such that the statement is “fairly representative of relevant points of view.” The Joint Agreement presented here is such a statement, as the Secretary determined.

Contrary to the commenters’ suggestion, EPCA does not include any requirement that “relevant points of view” must include ideologically opposed points of view. Rather, EPCA ensures a diversity of opinions and interests by requiring that parties that provide a joint agreement must be fairly representative of relevant points of view (including representatives of manufacturers of covered products, States, and efficiency advocates), as determined by the Secretary. (42 U.S.C. 6295(p)(4)(A))

Moreover, regardless of whether amended energy conservation standards are recommended as part of a joint agreement or proposed by DOE, the standards have to satisfy the same criteria in 42 U.S.C. 6295(o). Thus, once DOE has determined that a joint agreement was submitted by interested persons that are fairly representative of relevant points of view, DOE then determines whether the joint agreement satisfies the relevant statutory criteria. As a result, in evaluating whether comments provide a reasonable basis for withdrawing a direct final rule, it is the substance of the comments, not the number of stakeholders that submit statements in favor of, or opposed to, the joint agreement, that determines whether a rule should be withdrawn.

DOE also finds meritless the contention that the Joint Agreement parties are not competent to present a statement for purposes of section 6295(p). Contrary to the characterizations by the AGs of TN *et al.* and AG of MT, the parties to the Joint Agreement have an established historical record of participation in DOE rulemakings and have submitted detailed comments in the past that demonstrate a thorough understanding of technical, legal, and economic aspects of appliance standards rulemakings, including factors affecting specific groups such as low-income households.

In a follow-up letter from the parties to the Joint Agreement, each organization provided a brief description of its background. American Council for an Energy-Efficient Economy is a nonprofit research organization and its independent analysis advances investments, programs, and behaviors that use energy more effectively and help build an equitable clean energy future. Alliance for Water Efficiency is a nonprofit dedicated to efficiency and sustainable use of water that provides a forum for collaboration around policy, information sharing, research, education, and stakeholder engagement. ASAP organizes and leads a broad-based

coalition effort that works to advance new appliance, equipment, and lighting standards that cut emissions that contribute to climate change and other environmental and public health harms, save water, and reduce economic and environmental burdens for low- and moderate-income households. AHAM represents more than 150 member companies that manufacture 90 percent of the major, portable and floor care appliances shipped for sale in the United States. CFA is an association of more than 250 non-profit consumer and cooperative groups that advances the consumer interest through research, advocacy, and education. Consumer Reports is a mission-driven, independent, nonprofit member organization that empowers and informs consumers, incentivizes corporations to act responsibly, and helps policymakers prioritize the rights and interests of consumers in order to shape a truly consumer-driven marketplace. Earthjustice is a nonprofit public interest environmental law organization advocating to advance clean energy and combat climate change. National Consumer Law Center supports consumer justice and economic security for low-income and other disadvantaged people in the United States through its expertise in policy analysis and advocacy, publications, litigation, expert witness services, and training. National Resources Defense Council is an international nonprofit environmental organization with expertise from lawyers, scientists, and other environmental specialists. Northwest Energy Efficiency Alliance is a collaboration of 140 utilities and efficiency organizations working together to advance energy efficiency in the Northwest on behalf of more than 13 million consumers. Pacific Gas and Electric Company represents one of the largest combined gas and electric utilities in the Western United States, serving over 16 million customers across northern and central California.¹³ Finally, DOE notes that it had no role in requesting that the parties to the Joint Agreement submit the Joint Agreement or in negotiating the terms of the Joint Agreement. As noted in the Joint Agreement itself, the parties negotiated and accepted the agreement based on the totality of the agreement. DOE’s participation was limited to evaluating the joint submission under the criteria set forth in 42 U.S.C. 6295(p). DOE also notes that the preemptive effect of Federal energy conservation standards

¹³ This document is available in the docket: www.regulations.gov/comment/EERE-2014-BT-STD-0058-0074.

on State laws is clearly described in EPCA. *See* 42 U.S.C. 6297.

Therefore, DOE reaffirms its determination that the Joint Agreement was submitted by interested persons that are fairly representative of relevant points of view.

F. Formal Rulemaking

The AGs of TN *et al.* recommended that before enacting these stringent new standards for consumer clothes dryers, DOE return to formal rulemaking or, at a minimum, to proceed with informal notice-and-comment rulemaking to allow States and other relevant parties to participate in rulemaking processes that affect nearly every household appliance and also ensure a minimal level of political accountability by giving visibility to internal agency deliberations. The AGs of TN *et al.* further commented that the lack of a formal process does not allow people the opportunity to comment on rules that touch the lives of nearly all Americans. (AGs of TN *et al.*, No. 73 at pp. 5–8) The AG of MT similarly recommended that DOE halt the rulemaking. (AG of MT, No. 70 at p. 7)

The AG of MT expressed concern about pretext and circumvention of the Administrative Procedure Act, regarding DOE's conduct in this rulemaking and in recent litigations. (*Id.* at pp. 1–2)

AHAM stated that interested parties have had ample opportunity to comment through multiple stages of rulemaking. AHAM noted that, in fact, the March 2024 Direct Final Rule process provided an extra 110 days for interested parties to review DOE's final rule and submit comments—which met EPCA requirements. (AHAM, No. 69 at pp. 3–4)

In response, DOE notes that Congress granted DOE the authority to issue energy conservation standards as direct final rules subject to certain conditions and procedural requirements. As discussed in the March 2024 Direct Final Rule, DOE determined that Joint Agreement was submitted jointly by interested persons that are fairly representative of relevant points of view and the adopted energy conservation standards as recommended in the Joint Agreement would result in significant energy savings and are technologically feasible and economically justified as required under 42 U.S.C. 6295(o) and provided supporting analysis. 89 FR 18164, 18174–18175.

Additionally, DOE notes it followed the procedures in 42 U.S.C. 6295(p)(4) to publish a direct final rule in the **Federal Register** simultaneously with a NOPR proposing identical standards and allowed 110 days for public

comment. *See* 89 FR 18164 and 89 FR 18244. Regarding the comment about formal rulemaking, DOE has met all of its statutory requirements under its direct rule authority, which does not require formal rulemaking.¹⁴

G. Conforming Updates To Test Procedure Introductory Notes

The test procedures at appendix D1 and appendix D2 contain introductory notes that specify that either appendix D1 or appendix D2 must be used to determine compliance with energy conservation standards for clothes dryers manufactured on or after January 1, 2015, among other details.

The amended standards promulgated by the March 2024 Direct Final Rule are denoted in terms of CEF as determined in accordance with appendix D2 (*i.e.*, appendix D1 may not be used to determine compliance with the amended standards). Accordingly, in this document, DOE updates the introductory notes to both appendix D1 and appendix D2 to specify that use of appendix D2 is required to demonstrate compliance with the amended standards promulgated by the March 2024 Direct Final Rule, which are codified at 10 CFR 430.32(h)(4). The amended introductory note to appendix D2 also specifies that manufacturers may use appendix D2 to certify compliance with the clothes dryer standards provided at 10 CFR 430.32(h)(4) prior to the applicable compliance date for those standards.

In addition, the introductory note in appendix D2 specifies using the value for the representative average number of clothes dryer cycles in a year as defined in section 4.5.1(a) of that appendix until the compliance date of any amended standards for these products; and using a revised value of this number as defined in section 4.5.1(b) of that appendix beginning on the compliance date of any amended standards for these products. This document also updates the introductory note of appendix D2 to specify explicitly the date ranges during which section 4.5.1(a) or 4.5.1(b) must be used, corresponding to the compliance date of March 1, 2028 for the amended standards promulgated by the March 2024 Direct Final Rule.

IV. Impact of Any Lessening of Competition

EPCA directs DOE to consider any lessening of competition that is likely to result from new or amended standards.

¹⁴ DOE notes that outside of its direct rulemaking authority, DOE utilizes informal or legislative rulemaking (*i.e.*, notice and comment rulemaking under the Administrative Procedure Act, 5 U.S.C. 553) when it promulgates rules under EPCA, not formal rulemaking.

(42 U.S.C. 629(p)(4)(A)(i) and (C)(i)(II); 42 U.S.C. 6295(o)(2)(B)(i)(V)) It also directs the Attorney General of the United States (“Attorney General”) to determine the impact, if any, of any lessening of competition likely to result from a proposed standard and to transmit such determination to the Secretary within 60 days of the publication of a proposed rule, together with an analysis of the nature and extent of the impact. (42 U.S.C. 6295(o)(2)(B)(i)(V) and (B)(ii)) To assist the Attorney General in making this determination, DOE provided the Department of Justice (“DOJ”) with copies of the March 2024 Direct Final Rule, the corresponding NOPR, and the March 2024 Direct Final Rule TSD for review. DOE has published DOJ's comments at the end of this document.

In its letter responding to DOE, DOJ concluded that, based on its review, the direct final rule standards for consumer clothes dryers are unlikely to have significant adverse impact on competition.

V. Conclusion

In summary, based on the previous discussion, DOE has determined that the comments received in response to the direct final rule for amended energy conservation standards for consumer clothes dryers do not provide a reasonable basis for withdrawal of the direct final rule. As a result, the energy conservation standards set forth in the direct final rule became effective on July 10, 2024. Compliance with these standards is required on and after March 1, 2028.

List of Subjects in 10 CFR Part 430

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Intergovernmental relations, Reporting and recordkeeping requirements, Small businesses.

Signing Authority

This document of the Department of Energy was signed on September 30, 2024, by Jeffrey Marootian, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of

the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on September 30, 2024.

Treena V. Garrett,

*Federal Register Liaison Officer, U.S.
Department of Energy.*

For the reasons set forth in the preamble, DOE amends part 430 of chapter II, subchapter D, of title 10 of the Code of Federal Regulations, to read as set forth below:

PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

■ 1. The authority citation for part 430 continues to read as follows:

Authority: 42 U.S.C. 6291–6309; 28 U.S.C. 2461 note.

■ 2. Revise the introductory Note to appendix D1 to subpart B of part 430 to read as follows:

Appendix D1 to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Clothes Dryers

Note: The procedures in either this appendix or appendix D2 to this subpart must be used to determine compliance with the energy conservation standards for clothes dryers provided at § 430.32(h)(3). Manufacturers must use a single appendix for all representations, including certifications of compliance, and may not use this appendix for certain representations and appendix D2 to this subpart for other representations. The procedures in appendix D2 to this subpart must be used to determine compliance with the energy conservation standards for clothes dryers provided at § 430.32(h)(4).

* * * * *

■ 3. Revise the introductory Note to appendix D2 to subpart B of part 430 to read as follows:

Appendix D2 to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Clothes Dryers

Note: The procedures in either appendix D1 to this subpart or this appendix must be used to determine compliance with the energy conservation standards for clothes dryers provided at § 430.32(h)(3). Manufacturers must use a single appendix for all representations, including certifications of compliance, and may not use appendix D1 to this subpart for certain representations and this appendix for other representations. The procedures in this appendix must be used to determine compliance with the energy conservation standards for clothes dryers provided at § 430.32(h)(4). Manufacturers may use this appendix to certify compliance with the clothes dryer standards provided at § 430.32(h)(4) prior to the applicable compliance date for those standards.

Per-cycle standby mode and off mode energy consumption in section 4.5 of this appendix is calculated using the value for the annual representative average number of clothes dryer cycles in a year specified in section 4.5.1(a) of this appendix until March 1, 2028. Beginning on March 1, 2028, per-cycle standby mode and off mode energy consumption in section 4.5 of this appendix is calculated using the value for the annual representative average number of clothes dryer cycles in a year specified in section 4.5.1(b) of this appendix.

* * * * *

Note: The following appendix will not appear in the Code of Federal Regulations.

Appendix A

May 16, 2024

Ami Grace-Tardy
Assistant General Counsel for Legislation,
Regulation and Energy Efficiency
U.S. Department of Energy
Washington, DC 20585
Ami.Grace-Tardy@hq.doe.gov

Re: Consumer Clothes Dryers Energy
Conservation Standards

DOE Docket No. EERE-2014-BT-STD-0058
Dear Assistant General Counsel Grace-Tardy:

I am responding to your March 25, 2024, letter seeking the views of the Attorney General about the potential impact on competition of proposed energy conservation standards for consumer clothes dryers.

Your request was submitted under Section 325(o)(2)(B)(i)(V) of the Energy Policy and Conservation Act, as amended (ECPA), 42 U.S.C. 6295(o)(2)(B)(i)(V), which requires the Attorney General to make a determination of the impact of any lessening of competition that is likely to result from the imposition of proposed energy conservation standards. The Attorney General's responsibility for responding to requests from other departments about the effect of a program on competition has been delegated to the Assistant Attorney General for the Antitrust Division in 28 CFR 0.40(g). The Assistant Attorney General for the Antitrust Division has authorized me, as the Policy Director for the Antitrust Division, to provide the Antitrust Division's views regarding the potential impact on competition of proposed energy conservation standards on his behalf.

In conducting its analysis, the Antitrust Division examines whether a proposed standard may lessen competition, for example, by substantially limiting consumer choice, by placing certain manufacturers at an unjustified competitive disadvantage, or by inducing avoidable inefficiencies in production or distribution of particular products. A lessening of competition could result in higher prices to manufacturers and consumers.

We have reviewed the proposed standards contained in the Notice of Proposed Rulemaking (89 Fed. Reg. 18244, March 12, 2024), and the Direct Final Rule (89 Fed. Reg. 18164, March 12, 2024) and request for comments and the related Technical Support Documents. We have also reviewed public comments and reviewed the Docket. Based on this review, our conclusion is that the

proposed energy conservation standards for consumer clothes dryers are unlikely to have a significant adverse impact on competition.

Sincerely,

/s/

David G.B. Lawrence,
Policy Director.

[FR Doc. 2024–23257 Filed 10–7–24; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 3

[Docket No.: FAA–2023–1194; Amendment No. 3–3]

RIN 2120–AL85

U.S. Agents for Service on Individuals With Foreign Addresses Who Hold or Apply for Certain Certificates, Ratings, or Authorizations

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA will require individuals with foreign addresses, and no U.S. physical address of record on file with the FAA, who hold or apply for certain certificates, ratings, or authorizations to designate a U.S. agent for service of FAA documents. The U.S. agent will receive service of FAA documents on the certificate holder or applicant's behalf. This rule facilitates the FAA's ability to accomplish prompt and cost-effective service of process and service of other safety-critical or time-sensitive documents to individuals abroad through service on their U.S. agents.

DATES:

Effective dates: Amendatory instructions 1 (part 3) and 2 (subpart C of part 3) are effective October 8, 2024, amendatory instruction 3 (§ 3.303(d) and (e)) is effective January 6, 2025, and amendatory instruction 4 (§ 3.303(d)) is effective July 7, 2025.

Compliance dates: The compliance dates for this final rule are as follows: January 6, 2025, for applicants of any certificate, rating, or authorization issued under part 47, 61, 63, 65, 67, or 107, and July 7, 2025 for holders of any certificate, rating, or authorization issued under part 47, 61, 63, 65, 67, or 107.

ADDRESSES: For information on where to obtain copies of rulemaking documents and other information related to this final rule, see “How to Obtain

Additional Information” in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT:

Jessica Kabaz-Gomez, Office of the Chief Counsel, Enforcement Division, AGC–300, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; (202) 267–7395; email Jessica.Kabaz-Gomez@faa.gov.

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I. Executive Summary

A. Overview of Final Rule

This final rule adds subpart C to part 3 of title 14 of the Code of Federal Regulations (14 CFR). Subpart C requires individuals who have a foreign address and no U.S. physical address of record on file with the FAA to designate a U.S. agent for service if they apply for a certificate, rating, or authorization issued under 14 CFR part 47, 61, 63, 65, 67, or 107, or hold a certificate, rating,

or authorization issued under any of these parts.¹

The U.S. agent will receive service of FAA documents on behalf of the certificate, rating, or authorization holder or applicant. This final rule facilitates the FAA’s ability to accomplish prompt and cost-effective service of process and service of other safety-critical or time-sensitive documents to individuals abroad through service on their U.S. agents.² This will conserve agency resources, ensure that lengthy delays in service of process do not compromise aviation safety, and provide individuals abroad with timely notice of FAA actions and the opportunity for more expedient due process.

B. Summary of the Costs and Benefits

Approximately 115,000 individuals outside the U.S. as of July 2022 hold certificates, ratings, or authorizations issued under 14 CFR part 47, 61, 63, 65, 67, or 107 and do not have a U.S. physical address of record on file with the FAA. Service of process abroad imposes burdensome costs on the FAA. This rule will eliminate a majority of the costs of affecting international service and transfer some of these transaction costs back to the individual applicant or certificate holder by requiring designation of a U.S. agent. The costs experienced by these individuals will depend on the arrangements made (e.g., hiring a professional U.S. agent for service of process could cost \$50 to \$200 annually). Although there may be some initial costs to the FAA to revise its systems to accommodate the change, these costs will be offset by avoiding the

¹ See U.S. Agents for Service on Individuals With Foreign Addresses Who Hold or Apply for Certain Certificates, Ratings, or Authorizations, 88 FR 38003 (June 12, 2023). These individuals comprise the majority of individuals holding FAA certificates, ratings, and authorizations abroad and represent those who the agency most commonly serves with process and other safety-critical or time-sensitive documents. Individuals who only hold or apply for FAA certificates, ratings, or authorizations other than those issued under 14 CFR part 47, 61, 63, 65, 67, or 107 are not covered by the rule due to the limited benefit that would be derived by having the rule apply to them.

² See U.S. Agents for Service on Individuals With Foreign Addresses Who Hold or Apply for Certain Certificates, Ratings, or Authorizations, 88 FR 38004 (June 12, 2023). Examples of documents that may be served on U.S. agents may include reexamination letters, letters of investigation, Office of Aerospace Medicine letters requesting additional information or denying a medical certificate, and notices to aircraft owners of ineffective or invalid aircraft registration. Additionally, service of process includes the FAA’s service of documents that compel compliance, may be time-sensitive or safety-critical, and are subject to administrative or legal review, such as notices of proposed civil penalty or assessment, orders of suspension or revocation, and emergency orders of suspension or revocation.

foreign service of process costs that include international mailings and foreign translations.

II. Authority for This Rulemaking

The FAA’s authority to issue rules on aviation safety, such as the rules governing service that are addressed in this notice, is found in title 49 of the United States Code. Subtitle I, section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency’s authority, including the authority to issue regulations.

This rulemaking is issued under the authority described in 49 U.S.C. 44701(a)(5), which establishes the authority of the Administrator to prescribe regulations and minimum standards for other practices, methods, and procedures the Administrator finds necessary for safety in air commerce and national security. These regulations are within the scope of that authority and are consistent with 49 U.S.C. 46103, which governs the FAA’s service of notice, process, and actions, and provides that the FAA may effectuate service on an agent.

III. Background

A. Statement of the Problem

Previously, only U.S. air carriers, foreign air carriers and foreign persons operating a U.S.-registered aircraft in common carriage solely outside the United States were required to designate a U.S. agent for service of FAA documents.³ However, individuals across the world can hold and apply for FAA certificates, ratings, and authorizations. As of July 2022, there were approximately 115,000 individuals holding certificates, ratings, or authorizations issued under 14 CFR part 47, 61, 63, 65, 67, or 107 who had a foreign address and did not have a U.S. physical address of record on file with the FAA. Serving certain documents on these individuals outside of the U.S. presented a challenge for the FAA. Accomplishing valid service of process abroad requires compliance with international service requirements under multi-lateral treaties⁴ or by other means that comport with the receiving

³ See 49 U.S.C. 46103(a)(1) (requiring air carriers and foreign air carriers to designate an agent) and 14 CFR 119.49 and 129.9 (implementing 46103(a)(1)).

⁴ See for example, the Hague Service Convention, 20 U.S.T. 361 (signed Nov. 15, 1965), the Inter-American Convention on Letters Rogatory (adopted Jan. 30, 1975), and the Additional Protocol to the Convention (IACAP) (adopted May 8, 1979), S. Treaty Doc. No. 98–27 (1986).

country's laws and the U.S.'s applicable laws regulating extraterritorial service.

The FAA's service of process abroad triggers these international service requirements, specifically when the FAA sends documents abroad that compel compliance and are subject to administrative or judicial review. Such documents may include notices of proposed civil penalties, orders of suspension or revocation, and emergency orders of suspension or revocation. International service requirements can significantly delay service of these documents for months (and in some cases over a year), and also impose additional costs on the agency. Document recipients cannot waive these international service requirements, nor can they be circumvented with electronic service.

B. Summary of the Notice of Proposed Rulemaking (NPRM)

The NPRM was published in the **Federal Register** on June 12, 2023, and the comment period for the NPRM closed on August 11, 2023.⁵ The comment period was reopened on October 13, 2023, until October 30, 2023, due to a commenter's request to extend the comment period.⁶

The NPRM proposed adding a new subpart C to part 3 of 14 CFR to require individuals who have a foreign address and no U.S. physical address of record on file with the FAA to designate a U.S. agent for service if they apply for a certificate, rating, or authorization issued under 14 CFR part 47, 61, 63, 65, 67, or 107, or hold a certificate, rating, or authorization issued under any of these parts. A U.S. agent for service was defined as an entity or an adult (18 or older) with a U.S. address who is designated to receive FAA service on their behalf. Accordingly, the NPRM proposed allowing individuals to hire any entity, including registered agent service companies, with a U.S. address to be their designated U.S. agent. Alternatively, it proposed permitting individuals to designate any adult who is 18 or older with a U.S. address, including a relative or associate, to be their U.S. agent. The rule also provided requirements on what type of U.S. address the FAA would accept as sufficient for a U.S. agent.

The NPRM proposed that a U.S. agent would receive service of process, and other time-sensitive or safety-critical documents from the FAA on behalf of the individual certificate, rating, or

authorization holder or applicant. The U.S. agent would be responsible for timely transmitting all documents the FAA served on the U.S. agent to the individual who designated them. For this reason, the NPRM proposed the requirement that a U.S. agent be mentally competent to assume this duty. The NPRM also proposed that an individual must ensure their U.S. agent understands the requirements for serving as a U.S. agent and agrees to serve in that capacity. As explained in the NPRM, the responsibility for ensuring these requirements are met would fall on the individual designating the U.S. agent. Individuals designating U.S. agents would be required to certify to the FAA, under penalty of perjury, that a U.S. agent has accepted the responsibility of receiving FAA service on behalf of the individual.

Additionally, the NPRM emphasized that the individual who designates a U.S. agent would be responsible for ensuring that the FAA can serve documents to their U.S. agent. An individual designating a U.S. agent for service would be required to provide the U.S. agent's full name; their U.S. address; their email address, should electronic service be feasible; their fax number (optional); and their phone number (optional), in the event of service issues. Individuals would be required to keep their U.S. agent designation current. Absent extraordinary circumstances, the FAA would consider service on an individual's U.S. agent the equivalent of service directly on the individual, triggering all appeal and reply deadlines provided in the document being served.

The NPRM explained that the rule would facilitate the FAA's ability to accomplish prompt and cost-effective service of process and service of other safety-critical or time-sensitive documents to individuals abroad through service on their U.S. agents. This would conserve agency resources, ensure that lengthy delays in service of process do not compromise aviation safety, and provide individuals abroad with timely notice of FAA actions and the opportunity for more expedient due process.

C. General Overview of Comments

The FAA received a total of 14 comments, two of which were duplicates. All comments were from individual anonymous commenters. Five of the commenters opposed the rule. Three of these commenters suggested changes, as did one additional commenter who neither supported nor opposed the proposed rule. The commenters' suggested changes are

discussed more fully in the Discussion of Comments and the Final Rule section. Seven of the comments were outside the scope of the rule.

IV. Discussion of Comments and the Final Rule

A. Request for Use of the Defined Term "U.S. agent address"

A commenter noted that the proposed rule defined the term "U.S. agent address" in proposed § 3.302, the definition section, but the term was not used in the proposed regulation. The FAA agrees and amends proposed § 3.303(b) in the final rule to include the term "U.S. agent address" for clarification. This is a non-substantive change.

B. Request for Exception From the U.S. Agent for Service Requirement for U.S. Government Employees, Military Members, and Special Purpose Pilot Authorization (SPPA) Holders

Two commenters requested full exception from the applicability of the rule for certain certificate holders. Specifically, the commenters suggested that U.S. Government employees, military members, and special purpose pilot authorization (SPPA) holders should be excepted from the rule because the FAA should easily be able to find and contact them through their employers (such as the U.S. Government, military, or private companies). The FAA notes the purpose of the rule is to provide service of documents within the U.S. to designated agents of individuals, including those whose location abroad may already be known, such as U.S. Government employees, military members, and SPPA holders. More importantly, service on an individual's employer that has not been designated as their agent does not satisfy service of process requirements under 49 U.S.C. 46103. The rule, however, does not preclude that individual from designating their employer as their U.S. agent for service if the employer agrees and meets the requirements provided by this rule in 14 CFR part 3, subpart C. Accordingly, the FAA is adopting the rule as proposed, without the requested exceptions.

C. Request for Pilots To Have Alternatives to a U.S. Agent for Service Such as Email or Voluntary and Temporary Certificate Surrender When Pilots Go Abroad

One commenter requested that the FAA consider alternatives to the rule that would only apply to pilots. Specifically, the commenter requested

⁵ U.S. Agents for Service on Individuals With Foreign Addresses Who Hold or Apply for Certain Certificates, Ratings, or Authorizations, Notice of Proposed Rulemaking, 88 FR 38001 (June 12, 2023).

⁶ 88 FR 70911.

that the FAA consider email service for pilots or allow pilots to temporarily and voluntarily surrender their certificate(s) to the FAA for the time they are abroad. The FAA notes that alternatives to the rule that would only apply to pilots, as the commenter proposed, rather than all the applicable certificate, rating, and authorization holders and applicants impacted by this rule would be unequal because there is not any justification for favoring pilots over other impacted groups. Nevertheless, the FAA considered the proposed alternatives, in case they could be viable options for all individuals impacted by the rule. The FAA determined that neither option is a viable alternative to a U.S. agent.

The NPRM already addressed why email service was not a viable alternative to this rule. Specifically, the NPRM explained that international service conventions do not expressly authorize email service of process abroad, and that email service abroad could violate the domestic law of the receiving state and potentially result in judgments that are unenforceable in foreign courts.⁷ Accordingly, the FAA did not adopt the commenter's proposed email alternative to a U.S. agent.

The commenter's second proposed alternative of temporary and voluntary certificate surrender to the FAA does not remedy the issue the rule is addressing. The purpose of the rule is to assist the FAA with efficient and effective service of documents to individuals abroad. An individual's temporary and voluntary certificate surrender for the time they are abroad would not assist the FAA with serving a document to the individual once they are outside the United States. For example, if an individual violates the Federal Aviation Regulations before going to live abroad for a year, the FAA may need to take enforcement action and serve the individual with a notice or order for that violation when they are abroad. This would be true regardless of whether the individual decides to put their certificate on hold with the FAA temporarily and voluntarily for the time they are abroad. Lastly, the FAA's regulations do not provide for temporary and voluntary certificate surrenders because to create a system to receive, temporarily store, and return an individual's physical certificates would be costly. The FAA, therefore, has not adopted the commenter's proposed

alternative of temporary and voluntary certificate surrender to the FAA.

D. Miscellaneous Issues

1. Commenters Who Opposed the Rule Without Proposing Changes

Two commenters generally opposed the rule, without proposing any changes, which the FAA believes is based on a misunderstanding of current requirements or the rule, as proposed. Both commenters asserted that an individual with a U.S. address of record with the FAA does not have to designate a U.S. agent or be reachable at their U.S. address, and, therefore, questioned why an individual abroad, with no U.S. postal address, would need to establish more reliable postal communication with the FAA by designating a U.S. agent. The underlying assumption that certificate, rating, and authorization holders do not have to be reachable at their address of record with the FAA, whether in the U.S. or abroad, is incorrect. The FAA's responsibility of ensuring a safe National Airspace System requires that the agency be able to reach certificate, rating, and authorization holders.⁸ Individuals are expected to be reachable at their address of record on file with the FAA.

However, the purpose of this rule is not to address the reliability of individuals' addresses, regardless of location. Rather, this rule is intended to provide the FAA with a means to provide timely and cost-effective service to individuals located abroad in light of international service requirements. The FAA can more effectively and efficiently send mail to a U.S. address than abroad due to international service requirements that are discussed in the NPRM.⁹ This distinction justifies the

⁸ See U.S. Agents for Service on Individuals With Foreign Addresses Who Hold or Apply for Certain Certificates, Ratings, or Authorizations, Notice of Proposed Rulemaking, 88 FR 38002 (June 12, 2023). The FAA's service of process abroad can trigger international service requirements, which can create a serious risk to aviation safety. For example, when the FAA is serving emergency orders of revocation or suspension, the individual may attempt to continue exercising the associated privileges of the certificate, rating, or authorization, until the FAA serves the individual in accordance with international service requirements, which may take months and in some instances over a year.

⁹ See 88 FR 38002. The two international service conventions applicable to the FAA's service of certain documents are the Hague Service Convention, 20 U.S.T. 361 (signed Nov. 15, 1965), and the Inter-American Convention on Letters Rogatory, adopted January 30, 1975, together with the Additional Protocol to the Convention (IACAP), adopted May 8, 1979, S. Treaty Doc. No. 98–27 (1986). The main method for service under either convention, is through a country's designated central authority, which is cumbersome, slow, and costly compared to service of process accomplished directly through registered mail on the intended recipient.

requirement of U.S. agents for individuals who have a foreign address of record on file with the FAA and no U.S. physical address of record on file with the FAA.

The FAA believes the second commenter also misunderstood the proposed rule as requiring individuals to designate a secondary U.S. agent in the event their primary U.S. agent is on vacation. The NPRM did not propose to require individuals to designate two U.S. agents. Rather, the NPRM explained the importance of ensuring reachability in the event a designated U.S. agent for service is temporarily unable to accept service and offered an example of a proposed solution that did not require the designation of a back-up U.S. agent. The NPRM provided that U.S. agents could have a friend or associate collect the mail and notify the individual of the service. Therefore, the FAA is not making any changes to the rule as a result of the comments.

2. Comments on the Privacy Impact Assessment and Civil Aircraft Registry Electronic Services Requirements

The FAA received three comments that asked about the public availability of the Privacy Impact Assessment (PIA), which was addressed by reopening the comment period when the PIA became publicly available on the Department of Transportation's website. Another comment, received after the comment period was reopened, stated that 15 days was not enough time to comment on the PIA. The FAA considered 15 days to be sufficient time to comment on the PIA. The document was publicly available since August 23, 2023, almost two months before the reopening of the comment period and is not a document that requires public comment under the Administrative Procedure Act.

Finally, three comments were about the Civil Aircraft Registry Electronic Services (CARES) requirements and availability of that system for U.S. agent designation. These comments are out of scope and premature because they did not specifically discuss the implementation of the NPRM, but rather were about the CARES system, which is not the system of collection for the U.S. agent information. The PIA simply identified CARES as one potential system FAA could use to collect U.S. agent information at some point in the future. The FAA has not made changes in the final rule based on these comments and recommends certificate holders and applicants reference

⁷ While section 219 of the FAA Reauthorization Act of 2024 permits electronic or facsimile transmission by the FAA to the person to be served or the designated agent of that person, the FAA must also comply with international service conventions that currently do not expressly authorize email service of process abroad.

Advisory Circular (AC) 3–1¹⁰ for further information on the information that the FAA will collect and how it will do so in accordance with this final rule.

3. Final Rule Compliance Dates

This final rule changes the compliance date noted in the NPRM, which was six months after the date of publication in the **Federal Register** to nine months after the date of publication in the **Federal Register**. The final rule clarifies there are two compliance dates. The compliance dates for this final rule are as follows: January 6, 2025, for applicants of any certificate, rating, or authorization issued under part 47, 61, 63, 65, 67, or 107, and July 7, 2025 for holders of any certificate, rating, or authorization issued under part 47, 61, 63, 65, 67, or 107. This additional time for current certificate, rating, or authorization holders is provided to ensure FAA preparedness for the collection of U.S. agent designations and to provide more time for individuals to come into compliance with the final rule.

4. FAA Guidance Materials: Advisory Circulars and Orders

The FAA is publishing an Advisory Circular, U.S. Agents for Service, with this final rule.¹¹ It specifies the acceptable form and manner for individuals to submit their designation of a U.S. agent. The following FAA Advisory Circulars will also be updated, as necessary, to reflect this final rule: AC 61–65H, AC 61–135A, AC 61–143, AC 65–30B, AC 65–23A, AC 65–32A and AC 65–34A. The FAA's Advisory Circulars are publicly available on FAA's website.¹²

V. Regulatory Notices and Analyses

Federal agencies consider impacts of regulatory actions under a variety of Executive orders and other requirements. First, Executive Order 12866 and Executive Order 13563, as amended by Executive Order 14094 (“Modernizing Regulatory Review”), direct that each Federal agency propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 (Pub. L. 96–354) requires

agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Pub. L. 96–39) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100,000,000 or more (adjusted annually for inflation) in any one year. The current threshold after adjustment for inflation is \$183,000,000, using the most current (2023) Implicit Price Deflator for the Gross Domestic Product. This portion of the preamble summarizes the FAA's analysis of the economic impacts of this rulemaking.

In conducting these analyses, the FAA has determined that this final rule: (i) will result in benefits that justify costs; (ii) is not an economically “significant regulatory action” as defined in section 3(f) of Executive Order 12866; (iii) will not have a significant economic impact on a substantial number of small entities as amended; (iv) will not create unnecessary obstacles to the foreign commerce of the United States; and (v) will not impose an unfunded mandate on State, local, or tribal governments, or on the private sector.

A. Regulatory Impact Analysis

On June 12, 2023, the FAA published a NPRM and received 14 comments. None of the comments expressed concerns with economic impacts of the proposal except one. One commenter expressed concern that the rule's cost to individual pilots would be between \$15 million and \$30 million annually, and also expressed concern about the cost of enacting the proposed regulatory change. However, the commenter does not provide an explanation for the cost estimate, therefore the FAA continues to use the estimate provided in the NPRM.

However, FAA has updated the cost of hiring a registered U.S. agent service company based on a more recent source. In the NPRM, FAA reported this cost could range from \$150 to \$300. The updated source reports this could be between \$50 and \$200.

1. Baseline for the Analysis

In July 2022, approximately 115,000 individuals applied for or held certificates, ratings, and authorizations issued under 14 CFR parts 47, 61, 63, 65, 67, and 107, had a foreign address, and did not have a U.S. physical

address of record on file with the FAA. The FAA estimates that approximately 97 percent of these individuals that used a foreign address are citizens of foreign countries. The FAA notes service of process abroad imposes costs on the agency. The FAA estimates that it sends over 8,000 documents abroad annually, including both service of process and other documents, at a cost close to \$600,000 including mailing costs, staff time, and translation services when required.¹³ Examples of documents that have been sent abroad are as follows:

1. *Aerospace Medicine's Letters*: a. All Denial Letters, b. Withdrawal of Special Issuance (SI) Authorization Letters, c. Special Issuance Authorization Letters, d. Re-examination/Request for Information Letters, e. Lack of Qualification Letters with Referral to Legal, f. Letters of Investigation, and g. Federal Drug and Alcohol Testing Letters of Investigation.

2. *Enforcement action documents*: a. Notice of Proposed Civil Penalty (NOPCP), b. Final Notice of Civil Penalty (FNPOCP), c. Order Assessing Civil Penalty (OACP), d. Notice of Proposed Assessment (NOPA), e. Civil Penalty Letter, f. Notice of Proposed Certificate Action (NOPCA), g. Order of Suspension (OS), h. Order of Revocation (OR), i. Emergency Order of Revocation (EOR), and j. Emergency Order of Suspension (EOS).

3. Flight Standards Reexamination Letters,

4. All FAA Program Office's Letters of Investigation, and

5. *Aircraft Registry Letters*: a. Notices to Aircraft Owners of Ineffective Aircraft Registration, and b. Notices to Aircraft Owners of Invalid Aircraft Registration.

2. Benefits

The benefits of the final rule include prompt and cost-effective service of these documents to individuals abroad through service on their U.S. agents. Prompt service will conserve agency resources, ensure that lengthy delays in service do not compromise aviation safety, and provide individuals abroad timely notice of the FAA's actions. However, these benefits are not quantified because the ultimate impacts on aviation are not known.

3. Costs

Under this final rule, the affected individuals will bear the transaction costs associated with having a foreign address on file with the FAA. There is a minimal cost associated with

¹⁰ AC 3–1 was published in concurrence with this final rule and can be found at www.faa.gov/browse/AC/doctypeDetails.

¹¹ The FAA has placed a copy of these Advisory Circular in the docket for this rulemaking, with the exception of AC 65–32A which is also under revision as part of another rulemaking and will be published with that rule.

¹² FAA Advisory Circulars are available at: www.faa.gov/regulations_policies/advisory_circulars/.

¹³ The average cost to FAA per document served abroad is \$75.

designating a new U.S. agent and any updates thereafter. Individuals may designate an entity or an adult (18 or older) with a U.S. address to serve as their U.S. agent. The FAA determined that the cost of hiring a registered U.S. agent service company may range from \$50 to \$200 annually.¹⁴ However, as discussed in the NPRM, many individuals with foreign addresses may have a friend or family member residing in the U.S. whom they may choose to designate as their U.S. agent, resulting in no annual costs to those individuals for hiring a U.S. agent for service.

The FAA will incur implementation costs to collect the U.S. agent information. However, the FAA anticipates developing an automated system that would not require agency staff processing time. The initial implementation costs will then be offset by saving the baseline foreign service process costs and avoiding the costs of translation services (required by contracting parties to the Hague Service Convention or IACAP).

4. Summary

In summary, the FAA expects that the benefits of prompt document service, which could affect aviation safety, will exceed any costs associated with implementing this rule. Costs associated with designating a U.S. agent for affected individuals abroad will be largely incurred by the individual who holds, or is applying for, the certificate, rating, or authorization, rather than the FAA. This final rule will eliminate a majority of the FAA's current costs of affecting international service and transfer some of these transaction costs back to the individual being served by requiring designation of a U.S. agent.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) of 1980, Public Law 96–354, 94 Stat. 1164 (5 U.S.C. 601–612), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121, 110 Stat. 857, Mar. 29, 1996) and the Small Business Jobs Act of 2010 (Pub. L. 111–240, 124 Stat. 2504, Sept. 27, 2010), requires Federal agencies to consider the effects of the regulatory action on small business and other small entities and to minimize any significant economic impact. The term “small entities” comprises small businesses and not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and

governmental jurisdictions with populations of less than 50,000.

The FAA did not identify any small entities that would be affected by this rule because it concerns only individuals and not their employers or entities or businesses the individuals are associated with. The FAA did not receive any comments on the basis for this certification during the public comment period after the publication of the associated NPRM. Therefore, the FAA certifies that this rule will not have a significant economic impact on a substantial number of small entities.

International Trade Impact Assessment

The Trade Agreements Act of 1979 (Pub. L. 96–39), as amended by the Uruguay Round Agreements Act (Pub. L. 103–465), prohibits Federal agencies from establishing standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, the establishment of standards is not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standard has a legitimate domestic objective, such as the protection of safety, and does not operate in a manner that excludes imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA has determined that this rule is not considered an unnecessary obstacle to trade.

C. Unfunded Mandates Assessment

The Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more (adjusted annually for inflation) in any one year. The current threshold after adjustment for inflation is \$183 million using the most current (2023) Implicit Price Deflator for the Gross Domestic Product. The FAA determined that this final rule will not result in the expenditure of \$187 million or more by State, local, or tribal governments or by the private sector, in the aggregate, or the private sector, in any one year.

D. Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public.

According to the 1995 amendments to the Paperwork Reduction Act (5 CFR 1320.8(b)(2)(vi)), an agency may not collect or sponsor the collection of information, nor may it impose an information collection requirement, unless it displays a currently valid Office of Management and Budget (OMB) control number.

This action contains the following new information collection requirements. As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA has submitted the information collection to OMB for its review.

Summary: The FAA is requiring individuals who hold or apply for certificates, ratings, or authorizations issued under 14 CFR part 47, 61, 63, 65, 67, or 107 and who have a foreign address and no U.S. physical address of record on file with the FAA to designate a U.S. agent.

Use: The information collected and maintained in FAA databases is used to serve various documents to the designated U.S. agents of individuals with a foreign address.

Respondents: As of July 2022, there were 115,132 individuals who held certificates, ratings, or authorizations issued under 14 CFR part 47, 61, 63, 65, 67, or 107 with a foreign address and who did not have a U.S. physical address of record on file with the FAA. After the implementation of the rule in Year 1, the FAA expects that the number of new applicants who would be required to designate a U.S. agent would be 4,362 annually. In addition, the FAA estimates that annually approximately 4,606 respondents might process a change of U.S. agent designation or an update to their U.S. agents' contact information.

Frequency: All 115,132 individuals with a foreign address, with no U.S. physical address, who currently hold certificates, ratings, or authorizations issued under 14 CFR part 47, 61, 63, 65, 67, or 107 are required to designate a U.S. agent once during the implementation of the rule in Year 1. Similarly, 4,362 respondents identified as applicants who do not currently hold any certificates, ratings, or authorization, would be required to designate a U.S. agent at the time of their application in Year 2. Additionally, 4,606 respondents might need to change their U.S. agent or update the information for their current U.S. agent. This would require submission of a new U.S. agent designation.

Annual Burden Estimate: The FAA estimates that it would take an individual 10 minutes to submit a U.S.

¹⁴ See www.chamberofcommerce.org/best-registered-agent-virginia (last accessed April 23, 2024).

agent designation. In Year 1, the number of annual burden hours would be 19,189 [(115,132 individuals × (10 minutes ÷ 60 minutes)], and 1,495 hours each year afterwards (= [(4,362 + 4,606) × (10 minutes ÷ 60 minutes)]). The annual cost of this U.S. agent designation requirement to individuals would be \$1,195,761 in Year 1 and \$93,131 each year afterwards.¹⁵

The collection of the U.S. agent designation will be fully automated. Therefore, there will be no new annual cost to the government.

E. International Trade Impact Assessment

The Trade Agreements Act of 1979 (Pub. L. 96–39), as amended by the Uruguay Round Agreements Act (Pub. L. 103–465), prohibits Federal agencies from establishing standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, the establishment of standards is not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standard has a legitimate domestic objective, such as the protection of safety and does not operate in a manner that excludes imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA has assessed the potential effects of this rule and determined that it will not create unnecessary obstacles to the foreign commerce of the United States.

F. Environmental Analysis

FAA Order 1050.1F identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this rulemaking action qualifies for the categorical exclusion identified in paragraph 5–6.6f and involves no extraordinary circumstances.

VI. Executive Order Determinations

A. Executive Order 13132, Federalism

The FAA has analyzed this final rule under the principles and criteria of Executive Order (E.O.) 13132, Federalism. The FAA has determined

that this action will not have a substantial direct effect on the states, or the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, will not have federalism implications.

B. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

Consistent with Executive Order 13175, Consultation and Coordination with Indian Tribal Governments,¹⁶ and FAA Order 1210.20, American Indian and Alaska Native Tribal Consultation Policy and Procedures,¹⁷ the FAA ensures that Federally Recognized Tribes (Tribes) are given the opportunity to provide meaningful and timely input regarding proposed Federal actions that have the potential to have substantial direct effects on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes; or to affect uniquely or significantly their respective tribes. At this point, the FAA has not identified any unique or significant effects, environmental or otherwise, to Indian tribes resulting from this final rule.

C. Executive Order 13211, Regulations That Significantly Affect Energy Supply, Distribution, or Use

The FAA analyzed this final rule under E.O. 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). The FAA has determined that it is not a “significant energy action” under the executive order and is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

D. Executive Order 13609, Promoting International Regulatory Cooperation

Executive Order 13609, Promoting International Regulatory Cooperation, promotes international regulatory cooperation to meet shared challenges involving health, safety, labor, security, environmental, and other issues and to reduce, eliminate, or prevent unnecessary differences in regulatory requirements. The FAA has analyzed this action under the policies and agency responsibilities of Executive Order 13609, and has determined that

this action will have no effect on international regulatory cooperation.

VII. Privacy

With regard to the information persons may submit in accordance with this final rule’s requirements, the FAA conducted a privacy impact assessment (PIA) under section 522(a)(5) of division H of the FY 2005 Omnibus Appropriations Act, Public Law 108–447, 118 Stat. 3268 (Dec. 8, 2004) and section 208 of the E-Government Act of 2002, Public Law 107–347, 116 Stat. 2889 (Dec. 17, 2002). The PIA found the NPRM’s proposed requirements affecting privacy include the collection of personally identifiable information (PII) of U.S. agents designated by individuals with a foreign address and no U.S. physical address on file with the FAA that hold or apply for certificates, ratings, or authorizations issued under 14 CFR part 47, 61, 63, 65, 67, or 107. The rule collects the U.S. agent’s full name, U.S. address, fax number (optional), phone number (optional), and email address.

As part of the PIA, the FAA analyzed the effect the rule would have on collecting, storing, and disseminating personally identifiable information (PII) of U.S. agents designated by individuals with a foreign address and no U.S. physical address on file with the FAA that hold or apply for certificates, ratings, or authorizations issued under 14 CFR part 47, 61, 63, 65, 67, or 107. The FAA also examined and evaluated protections and alternative information-handling processes in developing the rule to mitigate potential privacy risks. A copy of PIA is posted on DOT’s website.¹⁸

VIII. Additional Information

A. Electronic Access and Filing

A copy of the NPRM, all comments received, this final rule, the AC for designation of U.S. agents, and all background material may be viewed online at www.regulations.gov using the docket number listed above. A copy of this final rule will be placed in the docket. Electronic retrieval help and guidelines are available on the website. It is available 24 hours each day, 365 days each year. An electronic copy of this document may also be downloaded from the Office of the Federal Register’s website at www.federalregister.gov and the Government Publishing Office’s

¹⁵ Using a loaded composite wage rate of \$62.32 obtained from a select of number of foreign countries and \$10 a minute (=10/60 or 0.167 hour) estimated to submit a U.S. agent designation, the FAA calculates that these individuals would incur \$1,195,761, (= 115,132 × \$62/hour × 0.167 hour).

¹⁶ 65 FR 67249 (Nov. 6, 2000).

¹⁷ FAA Order No. 1210.20 (Jan. 28, 2004), available at www.faa.gov/documentLibrary/media/1210.pdf.

¹⁸ Upon finalization, PIAs are posted on the Department of Transportation’s Privacy Program page, available at [www.transportation.gov/individuals/privacy/privacy-impact-assessments#Federal%20Aviation%20Administration%20\(FAA\)](http://www.transportation.gov/individuals/privacy/privacy-impact-assessments#Federal%20Aviation%20Administration%20(FAA)).

website at www.govinfo.gov. A copy may also be found at the FAA's Regulations and Policies website at www.faa.gov/regulations_policies.

Copies may also be obtained by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue SW, Washington, DC 20591, or by calling (202) 267-9677. Commenters must identify the docket or notice number of this rulemaking.

All documents the FAA considered in developing this final rule, including economic analyses and technical reports, may be accessed in the electronic docket for this rulemaking.

B. Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires the FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. A small entity with questions regarding this document may contact its local FAA official, or the person listed under the **FOR FURTHER INFORMATION CONTACT** heading at the beginning of the preamble. To find out more about SBREFA on the internet, visit www.faa.gov/regulations_policies/rulemaking/sbre_act/.

List of Subjects in 14 CFR Part 3

Aircraft, Aviation safety, U.S. agent for service.

The Amendment

For reasons discussed in the preamble, the Federal Aviation Administration amends title 14, Code of Federal Regulations as follows:

PART 3—GENERAL REQUIREMENTS

■ 1. Effective October 8, 2024, the authority citation for part 3 is revised to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40113, 44701, 44704, 46111, and 46103.

■ 2. Effective October 8, 2024, add subpart C to read as follows:

Subpart C—Designated U.S. Agents for Service

Sec.

3.301 Applicability.

3.302 Definitions.

3.303 Designation of a U.S. agent for service.

§ 3.301 Applicability.

This subpart applies to individuals who:

(a) Do not have a U.S. physical address of record on file with the FAA;

(b) Have a foreign address of record on file with the FAA; and

(c) Hold or apply for certificates, ratings, or authorizations under part 47, 61, 63, 65, 67, or 107 of this chapter.

§ 3.302 Definitions.

U.S. agent address is an address in the States of the United States, the District of Columbia, or any U.S. territory or possession. If the U.S. agent is an entity, the address must be the U.S. agent's office address. If the U.S. agent is an individual, the address must be the U.S. agent's usual place of residence or, if applicable, the individual's U.S. military office address. If the U.S. agent is serving as a U.S. agent in their official capacity with the military, the address may be a military office address. A U.S. agent address may not be a post office box, military post office box, or a mail drop box.

U.S. agent for service (U.S. agent) is an entity or an adult (individual who is 18 or older) with a U.S. address who a certificate, rating, or authorization holder or applicant designates to receive FAA service on their behalf.

U.S. physical address is an address in the States of the United States, the District of Columbia, or any U.S. territory or possession, but excludes post office boxes, military post office boxes, mail drop boxes, and commercial addresses that are not also residential addresses.

§ 3.303 Designation of a U.S. agent for service.

(a) Individuals must designate a U.S. agent for service within the U.S. in writing to the FAA in a form and manner prescribed by the Administrator. Individuals designating a U.S. agent must ensure that the U.S. agent understands the requirements for receiving FAA service on behalf of the individual and is competent to perform that responsibility.

(b) The designation must include the U.S. agent's full name, U.S. agent address, email address, and certification by the individual that the U.S. agent has accepted responsibility for receiving FAA service on behalf of the individual. It may also include the U.S. agent's fax number and phone number.

(c) Individuals must notify the FAA in a form and manner prescribed by the Administrator of any change to their U.S. agent designation or the U.S. agent's contact information within 30 days of the change.

(d) Individuals must comply with the requirements listed in this subpart no later than:

(1) July 7, 2025, for holders of any certificate, rating, or authorization

issued under part 47, 61, 63, 65, 67, or 107. These individuals who fail to timely designate a U.S. agent for service and comply with the requirements under this subpart may not exercise the privileges of any certificate, rating, or authorization issued under part 47, 61, 63, 65, 67, or 107, and an individual aircraft owner's aircraft registration certificate will be considered ineffective; and

(2) January 6, 2025, for applicants of any certificate, rating, or authorization issued under part 47, 61, 63, 65, 67, or 107. An applicant who fails to designate a U.S. agent for service and comply with the requirements under this subpart shall not be issued a certificate, rating, or authorization under part 47, 61, 63, 65, 67, or 107.

■ 3. Effective January 6, 2025, amend § 3.303 by revising paragraph (d) and adding paragraph (e) to read as follows:

§ 3.303 Designation of a U.S. agent for service.

* * * * *

(d) Individuals holding any certificate, rating, or authorization issued under part 47, 61, 63, 65, 67, or 107 must comply with the requirements listed in this subpart no later than July 7, 2025. These individuals who fail to timely designate a U.S. agent for service and comply with the requirements under this subpart may not exercise the privileges of any certificate, rating, or authorization issued under part 47, 61, 63, 65, 67, or 107, and an individual aircraft owner's aircraft registration certificate will be considered ineffective.

(e) No individual shall be issued a certificate, rating, or authorization under parts 47, 61, 63, 65, 67, or 107 of this chapter unless the individual has designated a U.S. agent as required under this subpart.

■ 4. Effective July 7, 2025, amend § 3.303 by revising paragraph (d) to read as follows:

§ 3.303 Designation of a U.S. agent for service.

* * * * *

(d) No individual shall exercise the privileges of any certificate, rating, or authorization issued under part 47, 61, 63, 65, 67, or 107 of this chapter unless the individual has designated a U.S. agent as required under this subpart. Aircraft registration certificates issued to individuals who fail to designate a U.S. agent as required under this subpart will be ineffective.

* * * * *

Issued under authority provided by 49 U.S.C. 106(f), 44701(a), and 44703 in Washington, DC.

Michael Gordon Whitaker,
Administrator.

[FR Doc. 2024–22000 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 25, 91, 121, and 125

[Docket No. FAA–2024–2052; Amdt. Nos. 25–153A, 91–377A, 121–393A, 125–76A]

RIN 2120–AM00

Modernization of Passenger Information Requirements Relating to “No Smoking” Sign Illumination; Correction; Confirmation of Effective Date

AGENCY: Federal Aviation Administration (FAA), Department Of Transportation (DOT).

ACTION: Direct final rule; correction; confirmation of effective date.

SUMMARY: This action confirms the October 22, 2024, effective date of the *Modernization of Passenger Information Requirements Relating to “No Smoking” Sign Illumination* direct final rule published on August 23, 2024, and responds to the comments received on that direct final rule. This document also corrects the authority citation for a Code of Federal Regulations part revised in the direct final rule.

DATES: The effective date of October 22, 2024, for the direct final rule published August 23, 2024 (89 FR 68094) is confirmed. The correction to the direct final rule published August 23, 2024 (89 FR 68094), is effective October 22, 2024.

ADDRESSES: For information on where to obtain copies of rulemaking documents and other information related to this action, see “How To Obtain Additional Information” in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Catherine Burnett, Flight Standards Implementation and Integration Group, Air Transportation Division, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone (202) 267–8166; email Catherine.Burnett@faa.gov.

SUPPLEMENTARY INFORMATION:

I. Background

This action confirms the effective date of the *Modernization of Passenger Information Requirements Relating to*

“No Smoking” Sign Illumination direct final rule.¹ Currently, crewmembers must be able to manually turn aircraft “No Smoking” signs on and off. This requirement was implemented prior to the prohibition on smoking in passenger cabins during all phases of flight. As a general matter, there is no longer a need for the signs to indicate two different states of smoking permissibility because smoking is not typically permitted at any time on most transport category aircraft operated commercially in the United States. However, when smoking is permitted on aircraft, such as when they are operated privately, crewmembers still must be able to manually turn “No Smoking” signs on and off to inform passengers when it is acceptable to smoke. This direct final rule provides more flexibility by allowing “No Smoking” signs to be illuminated continuously. This direct final rule revises five sections of regulations that affect aircraft manufacturers and aircraft operators.

Aircraft manufacturers will benefit from relieving changes in title 14 of the Code of Federal Regulations (14 CFR), part 25. In addition, pilots and aircraft operators will benefit from relieving changes to regulations in parts 91, 121, and 125. The revisions to these five sections of 14 CFR will allow for “No Smoking” signs to be illuminated continuously without the requirement for a physical or software switch to be built into the aircraft at the factory or used by a crewmember during an aircraft operation. Specifically, the revision to part 25 imposes no new requirements on manufacturers; they may continue to make aircraft with manually operated “No Smoking” signs. However, as an alternative, the revision to part 25 allows aircraft on which the “No Smoking” signs remain illuminated continuously to receive type certification from the FAA without having to request relief from the current regulations. Similarly, with this direct final rule, operators will be able to operate aircraft where signs can either be manually operated by crewmembers or remain continuously illuminated.

The FAA has long recognized the incongruity between the prohibition on smoking in most commercial aircraft and the requirement for manufacturers to construct, and operators to operate, aircraft with “No Smoking” signs that can be turned on and off. For almost 30 years, the FAA has addressed this incongruity through equivalent level of

safety (ELOS) findings² and regulatory exemptions,³ which allows aircraft to have “No Smoking” signs that are continuously illuminated during flight operations. This rule makes such ELOS findings and regulatory exemptions unnecessary. Manufacturers will be able to continue to manufacture, and pilots and operators will be able to continue to operate, aircraft with “No Smoking” signs that can be turned on and off or “No Smoking” signs that are illuminated continuously.

Additionally, to align with the final rule *Use of Supplemental Restraint Systems* (89 FR 67834), effective October 21, 2024, the authority citation to part 91 in the direct final rule is corrected to remove the reference to 49 U.S.C. 106(g) which was removed and reserved by section 202 of Public Law 118–63.

II. Discussion of Comments

The “No Smoking” signs direct final rule was published August 23, 2024, and provided a period for public comment until September 23, 2024. The FAA received three comments related to this direct final rule. Two comments were from individual commenters, and one comment was from Airlines for America (A4A). A4A supported the direct final rule as proposed.

One individual commenter appreciated the anticipated stakeholder relief once regulated entities need no longer apply for exemptions for “No Smoking” signs. The commenter asserted that the FAA should consider using more direct final rulemaking actions, as appropriate, to revise regulations when there are numerous variances or exemptions from a CFR section. The commenter specifically noted, by way of example, numerous variances for EXIT signs that could be found in the **Federal Register**.⁴

² An aircraft can be type certificated, despite apparent noncompliance with specific airworthiness provisions, if “any airworthiness provisions not complied with are compensated for by factors that provide an equivalent level of safety.” 14 CFR 21.21(b)(1). These equivalent level of safety (ELOS) findings, also known as equivalent safety findings (ESF), can be described in issue papers. Issue papers are a structured means to address certain issues in the certification and validation processes of aircraft and aircraft parts. Issue papers establish a vehicle for formal communication between the FAA and the applicant, and track resolution of the subject issues. FAA Advisory Circular (AC) 20–166.

³ A petition for exemption is a request to the FAA by an individual or entity asking for relief from the requirements of a current regulation. 14 CFR 11.15.

⁴ *Petition for Exemption; Summary of Petition Received; Delta Air Lines, Inc.*, FR Doc. 2018–03115 (Feb. 15, 2018); *Petition for Exemption; Summary of Petition Received; Delta Air Lines, Inc.*, FR Doc. 2018–25364 (Nov. 21, 2018).

¹ *Modernization of Passenger Information Requirements Relating to “No Smoking” Sign Illumination* direct final rule, 89 FR 68094 (Aug. 23, 2024).

The FAA periodically reviews regulations and revises 14 CFR to support the safety and efficiency of the national airspace system. That review may result in a rulemaking action if it is appropriate to do so. While EXIT signs are outside the scope of this direct final rule, the FAA may address EXIT signs in a future rulemaking action.

The second individual commenter asserted that the “No Smoking” signs should be removed entirely. The commenter asserted that there are many passenger activities prohibited by FAA regulations, and the FAA should evaluate why only this prohibition is illuminated with signage. Therefore, the commenter believed the FAA should consider removing the “No Smoking” signs entirely to align with other prohibited activities that lack signage.

While there are many prohibited passenger activities on an aircraft, the FAA believes that the physical “No Smoking” sign, or the authorized equivalent thereof, are an important safety requirement. The physical reminder of the sign signals to passengers that they are not allowed to engage in a potentially hazardous smoking activity while onboard an aircraft. The “No Smoking” signs have been installed on aircraft for decades and continue to be an effective reminder for the traveling public. Therefore, the FAA will continue to require signage prohibiting smoking in the passenger cabin.

After consideration of the comments submitted in response to the direct final rule, the FAA has determined that no further rulemaking action is necessary. Therefore, the effective date of the direct final rule published August 23, 2024, at 89 FR 68094 is confirmed.

III. Correction of the Authority Citation for Part 91

In the **Federal Register** of August 22, 2024, in final rule *Use of Supplemental Restraint Systems* at 89 FR 67834, the FAA revised the authority citation for part 91 by removing 49 U.S.C. 106(g). However, the FAA retained that authority citation for part 91 in the published *Modernization of Passenger Information Requirements Relating to “No Smoking” Sign Illumination* direct final rule published in the **Federal Register** of August 23, 2024, at 89 FR 68094. To correct this error, the FAA is revising the authority citation for part 91.

IV. How To Obtain Additional Information

A. Electronic Access and Filing

A copy of the direct final rule, all comments received, this confirmation document, and all background material may be viewed online at www.regulations.gov using the docket number listed above. A copy of this confirmation document will be placed in the docket. Electronic retrieval help and guidelines are available on the website. It is available 24 hours each day, 365 days each year. An electronic copy of this document may also be downloaded from the Office of the Federal Register’s website at www.federalregister.gov and the Government Publishing Office’s website at www.govinfo.gov. A copy may also be found on the FAA’s Regulations and Policies website at www.faa.gov/regulations_policies.

Copies may also be obtained by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue SW, Washington, DC 20591, or by calling (202) 267-9677. Commenters must identify the docket or notice number of this rulemaking.

All documents the FAA considered in developing this final rule, including economic analyses and technical reports, may be accessed in the electronic docket for this rulemaking.

B. Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. A small entity with questions regarding this document, may contact its local FAA official, or the person listed under the **FOR FURTHER INFORMATION CONTACT** heading at the beginning of the preamble. To find out more about SBREFA on the internet, visit www.faa.gov/regulations_policies/rulemaking/sbre_act/.

Correction

In FR Doc. 2024-18602 in the **Federal Register** of Friday, August 23, 2024, the following correction is made:

PART 91 [Corrected]

■ 1. On page 68099, in the third column, in part 91, in amendment 3, the authority citation “49 U.S.C. 106(f), 106(g), 40101, 40103, 40105, 40113, 40120, 44101, 44111, 44701, 44704, 44709, 44711, 44712, 44715, 44716,

44717, 44722, 46306, 46315, 46316, 46504, 46506–46507, 47122, 47508, 47528–47531, 47534, Public Law 114–190, 130 Stat. 615 (49 U.S.C. 44703 note); articles 12 and 29 of the Convention on International Civil Aviation (61 Stat. 1180), (126 Stat. 11).” is corrected to read “49 U.S.C. 106(f), 40101, 40103, 40105, 40113, 40120, 44101, 44111, 44701, 44704, 44709, 44711, 44712, 44715, 44716, 44717, 44722, 46306, 46315, 46316, 46504, 46506–46507, 47122, 47508, 47528–47531, 47534, Public Law 114–190, 130 Stat. 615 (49 U.S.C. 44703 note); articles 12 and 29 of the Convention on International Civil Aviation (61 Stat. 1180), (126 Stat. 11).”

Issued under authority provided by 49 U.S.C. 106(f), 44701(a), and 41706(e) in Washington, DC.

Brandon Roberts,

Executive Director, Office of Rulemaking.

[FR Doc. 2024–23136 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2024–0769; Project Identifier AD–2023–00556–T; Amendment 39–22815; AD 2024–16–09]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 777–200, –200LR, –300, –300ER, and 777F series airplanes. This AD was prompted by a report indicating multiple findings of cracks in the fuselage skin common to the underwing longeron (UWL). This AD requires external or internal (depending on configuration) inspections for any cracking of the left and right side fuselage skin common to the UWL, and applicable on-condition actions. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of November 12, 2024.

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA–2024–0769; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110 SK57, Seal Beach, CA 90740–5600; telephone 562 797 1717; website myboeingfleet.com.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA–2024–0769.

FOR FURTHER INFORMATION CONTACT: Luis Cortez-Muniz, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206–231–3958; email: luis.a.cortez-muniz@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 777–200, –200LR, –300, –300ER, and 777F series airplanes. The NPRM published in the **Federal Register** on March 28, 2024 (89 FR 21446). The NPRM was prompted by a report indicating multiple findings of cracks in the fuselage skin common to the UWL. In the NPRM, the FAA proposed to require external or internal (depending on configuration) inspections for any cracking of the left and right side fuselage skin common to the UWL, and applicable on-condition actions. The FAA is issuing this AD to address fuselage skin cracking caused by cold work surface upset that is not removed from the mating parts and high joint load transfer or significant local bending stresses at critical fastener locations. The unsafe condition, if not addressed, could result in an inability of a principal structural element (PSE) to sustain limit load, leading to reduced structural integrity of the airplane and possible loss of control of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from FedEx Express, who found no issues that could interfere with the timely implementation of the proposed actions in the NPRM.

The FAA received additional comments from three commenters, including American Airlines, Boeing, and United Airlines. The following presents the comments received on the NPRM and the FAA’s response to each comment.

Request To Clarify Locations Specified in Paragraph (h)(3) of the Proposed AD

Boeing requested that paragraph (h)(3) of the proposed AD be clarified to specify that only the fuel tank side of fastener locations that penetrate the fuel tank boundary require cap seal dimensions to meet the dimensions given in Figure 1 to paragraph (h)(3) of the proposed AD. Boeing stated that the service information referenced in Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, contain instructions for applying cap seals to fasteners that penetrate a fuel tank boundary and fasteners that do not penetrate a fuel tank boundary. Boeing added that for fasteners that do not penetrate a fuel tank boundary, fastener sealing is used as a pressure seal to help mitigate corrosion and have sealing specifications that include minimum thickness requirements less than the amount shown in paragraph (h)(3) of the proposed AD that are acceptable for their intended function outside of the fuel tank. Boeing stated that for fasteners that penetrate the fuel tank, the cap seals on the interior side of the fuel tank act as a primary fuel seal, providing fault tolerance against electromagnetic effects (electrical fault currents and lightning currents), and are also cap sealed on the exterior side for corrosion prevention.

Boeing concluded that only the cap seals on the interior side of the fuel tank require the dimensions specified in Figure 1 of paragraph (h)(3) of the proposed AD to perform their intended function, which is consistent with the labels shown in Figure 1 of paragraph (h)(3) of the proposed AD. Boeing recommended replacing the text “applying a cap seal (sealant) to a fastener, fastener head, and fastener threads and collars, for this AD, during application of any cap seal to a fastener, fastener head, or fastener threads and collars” with the text “applying a cap seal (sealant) to a fastener location that penetrates the fuel tank boundary, for

this AD, during application of any cap seal to a fastener, fastener head, or fastener threads and collars inside the fuel tank.”

The FAA agrees to clarify paragraph (h)(3) of this AD for the reasons provided by the commenter. Locations that do not penetrate the fuel tank boundary do not require the same sealant application procedures. The FAA has added the text “inside the fuel tank” to paragraph (h)(3) of this AD. However, the FAA did not replace the text “to a fastener, fastener head, and fastener threads and collars” with the text “to a fastener location that penetrates the fuel tank boundary,” as recommended by the commenter, because the text “to a fastener, fastener head, and fastener threads and collars inside the fuel tank” better aligns with the language within the service information.

Request To Clarify Service Information in Paragraph (h)(3) of the Proposed AD

American Airlines requested that the FAA provide a comprehensive list of all service information that will be impacted by paragraph (h)(3) of the proposed AD. American Airlines stated that the statement “Where any service information referenced in Boeing Alert Requirements Bulletin 777–53A0100 RB” is vague and could potentially lead to confusion.

The FAA agrees to specify the service information affected by paragraph (h)(3) of this AD. In addition, the FAA notes that paragraph (h)(2) of this AD has similar language (“Where . . . any service information referenced in Boeing Alert Requirements Bulletin 777–53A0100 RB”). The FAA has added a note to paragraphs (h)(2) and (3) of this AD to specify that Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, refers to Boeing Service Bulletin 777–53–0084, Revision 2, dated December 9, 2020; Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020; and Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021.

Request To Add a Note to Paragraph (h)(3) of the Proposed AD

Boeing requested that the FAA add a note to paragraph (h)(3) of the proposed AD to refer to Boeing Model 777 Aircraft Maintenance Manual (AMM) section 28–11–00 as an acceptable cap sealing procedure to accomplish the actions required in that paragraph. Boeing stated it has received numerous queries from operators on Figure 1 to paragraph (h)(4) of AD 2023–17–14, which is identical to Figure 1 to paragraph (h)(3)

of the proposed AD. Operators have asked whether Boeing Model 777 AMM section 28–11–00 would be an acceptable procedure for accomplishing the requirements of paragraph (h)(4) of AD 2023–17–14. Boeing stated it believes that AMM 28–11–00 is an acceptable procedure for performing cap sealing inside the fuel tank because the AMM is the source material for the contents in Figure 1 to paragraph (h)(3) of the proposed AD and contains the same minimum seal thickness dimensions as shown in Figure 1.

The FAA agrees. Boeing 777 AMM 28–11–00 meets the sealant requirements of Figure 1 to paragraph (h)(3) of this AD. As such, it would be an acceptable procedure to follow when sealing inside the fuel tank in accordance with paragraph (h)(3) of this AD. The FAA has added a note to paragraph (h)(3) of this AD accordingly.

Request for Removal of Certain Exceptions That Are Related to Other ADs

United Airlines (United) requested removal of the exceptions in paragraphs (h)(4) through (6) of the proposed AD that are for service information other than Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023. United stated that it agrees with the intention of the proposed AD, but found the exceptions stated in paragraphs (h)(4) through (6) of the proposed AD to be unclear. United stated that it has other ongoing projects that use the instructions of Boeing Service Bulletin 777–53–0084, Revision 2, dated December 9, 2020; Boeing Service Bulletin 777 53–0087, Revision 1, dated March 4, 2020; and Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021; to comply with the requirements of AD 2019–11–02, Amendment 39–19648 (84 FR 28722, June 20, 2019) (AD 2019–11–02) and AD 2023–17–14, Amendment 39–22541 (88 FR 60111, August 31, 2023) (AD 2023–17–14). United pointed out that ADs 2019–11–02 and 2023–17–14 have not been updated to include the exceptions in those AD requirements and recommends that the exceptions removed from paragraphs (h)(4) through (6) of the proposed AD be added to the requirements of ADs 2019–11–02 and 2023–17–14.

The FAA disagrees with the request to remove the exceptions in paragraphs (h)(4) through (6) of this AD. If cracking is found during certain inspections required by Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, then certain actions in Boeing Service Bulletin 777–53–0084, Revision 2, dated December 9, 2020; Boeing

Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020; or Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021; might be required as corrective actions. In order to address the identified unsafe condition, the service information, as applicable, must be accomplished with the exceptions specified in (h)(4) through (6) of this AD. There are no new requirements for AD 2019–11–02 and AD 2023–17–14. However, as stated in paragraph (i) of this AD, for airplanes on which a front spar lower chord modification specified in Boeing Alert Requirements Bulletin 777–57A0122 RB is done as part of the requirements of paragraphs (g) and (h)(6) of this AD, the modification requirements of paragraph (g) of AD 2023–17–14 are terminated for the applicable side (left or right) on which the modification was done.

In addition, in the “Approval” paragraphs of Boeing Service Bulletin 777–53–0084, Revision 2, dated December 9, 2020; Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020; and Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021; it specifies that certain actions are an alternative method of compliance (AMOC) to the inspection and corrective action requirements of paragraph (g) of AD 2019–11–02, for modified longerons only. The FAA has not changed this AD in this regard.

Request To Add Paragraph for Terminating Action for AD 2019–11–02

American Airlines requested that the FAA add a paragraph similar to paragraph (i) of the proposed AD for terminating action for AD 2023–17–14 that refers to Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020, as the terminating action to AD 2019–11–02.

The FAA does not agree. As previously stated, the “Approval” paragraph of Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020, already includes an approval paragraph for the requirements of AD 2019–11–02. The FAA has not revised this AD in this regard.

Request To Add Clarifying Paragraph for Repetitive Inspections

American Airlines requested that the FAA add a paragraph clarifying that “If SB 777–53–0087 Rev 1 is accomplished due to findings from the inspections described in SB 777–53A0081 R02 (AD 2019–11–02), and NO skin repair is done, the repetitive inspections IAW SB 777–53A0100 will still be required since terminating action for those inspections is only valid if the underwing longeron

AND fuselage skin modification is accomplished in accordance with SB 777–53–0087 R01.”

The FAA concurs with American Airlines’ statement that repetitive inspections continue until the fuselage skin modification is done. The UWL with fuselage skin modification is terminating action to the repeat inspections in Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023. If Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020, is accomplished without the fuselage skin modification, repeat inspections in accordance with Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, continue to apply. The FAA notes that flagnote (a) in the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, specifies “Accomplishment of the left side UWL with fuselage skin modification in accordance with Revision 1 of Boeing Service Bulletin 777–53–0087 is terminating action for this repeat inspection.”

The FAA also notes where in the second paragraph of “Other Relevant Rulemaking” of the NPRM states “The accomplishment of the longeron modification specified in Boeing Service Bulletin 777–53–0084, Revision 2, dated December 9, 2020, or Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020” the text should state “The accomplishment of the longeron modification with fuselage skin modification specified in Boeing Service Bulletin 777–53–0084, Revision 2, dated December 9, 2020, or Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020.” However, the “Other Relevant Rulemaking” paragraphs are not restated in this AD. The FAA has not revised this AD in this regard.

Request To Allow Later Revisions of Service Information

American Airlines requested that the FAA allow the use of future revisions of Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020. American Airlines stated the Revision 2 of Boeing Service Bulletin 777–53–0087 will add new replacement and supplemental kits, add fastener installation instructions, update bracket installation instructions, correct fastener callouts and correct typographical errors.

The FAA does not agree. Revision 2 of Boeing Service Bulletin 777–53–0087 has not yet been FAA approved nor been published. The FAA may not refer to any document that does not yet exist in an AD. To allow operators to use later

revisions of the referenced document (issued after publication of the AD), either the FAA must revise the AD to reference specific later revisions, or operators must request approval to use later revisions as an alternative method of compliance with this AD under the provisions of paragraph (j) of this AD.

Request To Clarify Paragraph (h)(5) of the Proposed AD

American Airlines requested that the FAA clarify if paragraph (h)(5) of the proposed AD is exclusive to the center wing fuel tank location, or whether adjustments should also be made to the other steps that offer the choice to utilize Boeing Material Specification (BMS) 5–95 sealant or other sealants.

The FAA agrees to clarify. The exception in paragraph (h)(5) of this AD is applicable to sealant application in the center wing fuel tank only. The use of BMS 5–95 sealant instead of BMS 5–45 sealant is only a concern when the location being sealed is inside a fuel tank such that the sealant is directly exposed to fuel. Only Figure 13 and Figure 49 describe sealing operations inside a fuel tank using BMS 5–95 sealant. As such, paragraph (h)(5) of this AD is specifically limited to flagnote (f) of Figure 13 and Figure 49. Other locations (*i.e.*, other flagnotes and

figures) in the service information that provide an option of BMS 5–45 and BMS 5–95 are acceptable as written. The FAA also notes that a similar rationale applies to the exception in paragraph (h)(4) of this AD. The FAA has not changed this AD in this regard.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023. This material specifies procedures for external or internal (depending on configuration) detailed and ultrasonic or surface high frequency eddy current (HFEC) inspections for any cracking of the left and right side fuselage skin common to the UWL, and applicable on-condition

actions. On-condition actions include, among other things, modification of the fuselage skin, and post-modification inspections and applicable corrective actions (repairs of cracking). Compliance times for on-condition actions depend on inspection type, inspection findings, and modification status.

The FAA also reviewed Boeing Multi Operator Message MOM–MOM–24–0054–01B, dated January 26, 2024. This material specifies corrections for Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021, that address a non-destructive test manual (NDTM) error, fastener callout errors, inadequate cap seal instructions, figure orientation errors, minimum gap errors, missing fasteners on certain figures, affected groups missing from certain figures, and typographical errors.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 272 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
External or internal inspections.	Up to 21 work-hours × \$85 per hour = \$1,785 per inspection cycle.	\$0	\$1,785 per inspection cycle ...	\$485,520 per inspection cycle.

The FAA estimates the following costs to do any necessary on-condition

actions that would be required based on the results of the inspection. The agency

has no way of determining the number of aircraft that might need these actions:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per product
Modification	420 work-hours × \$85 per hour = \$35,700.	\$40,620	\$76,320.
Post-modification inspections	46 work-hours × \$85 per hour = \$3,910 per inspection cycle.	0	\$3,910 per inspection cycle.

The FAA has received no definitive data on which to base the cost estimates for the on-condition repairs specified in this AD.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section

44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2024–16–09 The Boeing Company:

Amendment 39–22815; Docket No. FAA–2024–0769; Project Identifier AD–2023–00556–T.

(a) Effective Date

This airworthiness directive (AD) is effective November 12, 2024.

(b) Affected ADs

This AD affects AD 2023–17–14, Amendment 39–22541 (88 FR 60111, August 31, 2023) (AD 2023–17–14).

(c) Applicability

This AD applies to The Boeing Company Model 777–200, –200LR, –300, –300ER, and 777F series airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by a report indicating multiple findings of cracks in the fuselage skin common to the underwing longeron (UWL). The FAA is issuing this AD to address fuselage skin cracking caused by cold work surface upset that is not removed from the mating parts and high joint load transfer or significant local bending stresses at critical fastener locations. The unsafe condition, if not addressed, could result in an inability of a principal structural element (PSE) to sustain limit load, leading to reduced structural integrity of the airplane and possible loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 777–53A0100, dated March 16, 2023, which is referred to in Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023.

Note 2 to paragraph (g): Guidance for accomplishing certain on-condition actions required by paragraph (g) of this AD can be found in Boeing Service Bulletin 777–53–

0084, Revision 2, dated December 9, 2020; Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020; and Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021.

(h) Exceptions to Requirements Bulletin Specifications

(1) Where the Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, use the phrase “the original issue date of Requirements Bulletin 777–53A0100 RB,” this AD requires using the effective date of this AD.

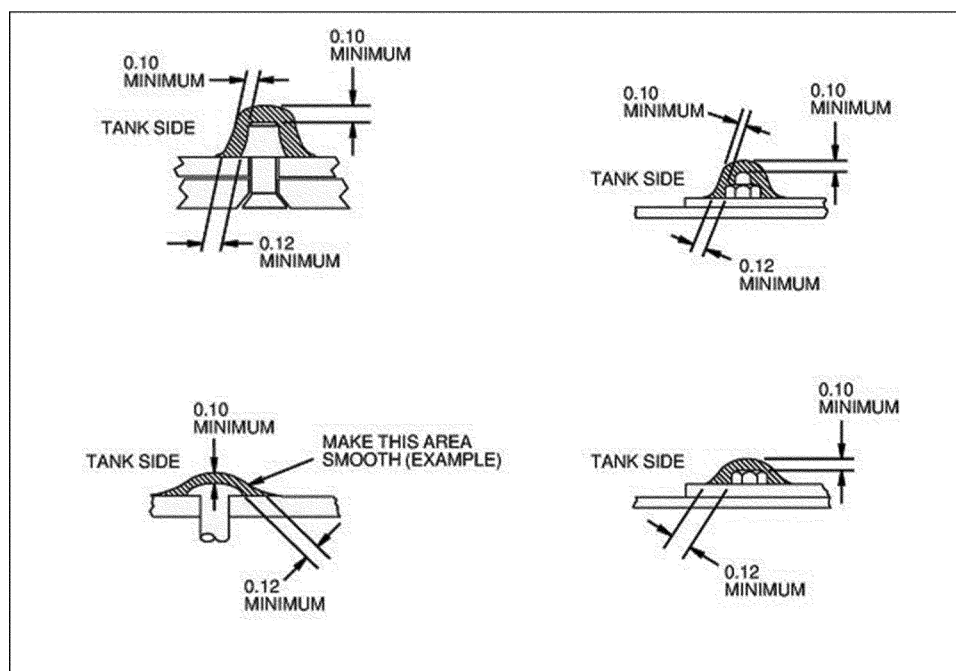
(2) Where Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, and any service information referenced in Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, specifies contacting Boeing for repair instructions: This AD requires doing the repair using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

Note 3 to paragraph (h)(2): This note applies to paragraphs (h)(2) and (3) of this AD. Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, refers to Boeing Service Bulletin 777–53–0084, Revision 2, dated December 9, 2020; Boeing Service Bulletin 777–53–0087, Revision 1, dated March 4, 2020; and Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021.

(3) Where any service information referenced in Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, specifies applying a cap seal (sealant) to a fastener, fastener head, and fastener threads and collars inside the fuel tank, for this AD, during application of any cap seal to a fastener, fastener head, or fastener threads and collars inside the fuel tank, the cap seal must be applied using a cap sealing procedure with thickness greater than or equal to the dimensions given in Figure 1 to paragraph (h)(3) of this AD.

Note 4 to paragraph (h)(3): Guidance on an acceptable cap sealing procedure for accomplishing the actions required by paragraph (h)(3) of this AD can be found in Boeing Model 777 Aircraft Maintenance Manual (AMM) section 28–11–00.

Figure 1 to Paragraph (h)(3)—Cap Sealing Dimensions (all Dimensions are in Inches)



(4) Where Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, specifies doing actions “in accordance with Revision 2 of Boeing Service Bulletin 777–53–0084,” for this AD, where flagnote (f) of Figure 7 and Figure 22 of that referenced service information (“Revision 2 of Boeing Service Bulletin 777–53–0084”) includes a sealant callout of Boeing Material Specification (BMS) 5–45 or an optional BMS 5–95, only BMS 5–45 is allowed.

(5) Where Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, specifies doing actions “in accordance with Revision 1 of Boeing Service Bulletin 777–53–0087,” for this AD, where flagnote (f) of Figure 13 and Figure 49 of that referenced service information (“Revision 1 of Boeing Service Bulletin 777–53–0087”) includes a sealant callout of BMS 5–45 or an optional BMS 5–95, only BMS 5–45 is allowed.

(6) Where Boeing Alert Requirements Bulletin 777–53A0100 RB, dated March 16, 2023, specifies doing actions “in accordance with the original issue of Boeing Alert Requirements Bulletin 777–57A0122 RB,” for this AD, the exceptions specified in paragraph (h)(6)(i) through (v) of this AD apply to that referenced service information (“the original issue of Boeing Alert Requirements Bulletin 777–57A0122 RB”) and the corrections identified in Boeing Multi Operator Message MOM–MOM–24–0054–01B, dated January 26, 2024, apply to that referenced service information.

(i) Where the “Compliance” paragraph of the referenced service information identifies “Tables 1 through 50,” the correct number of tables is Tables 1 through 54.

(ii) The referenced service information does not specify the application of cap seals to underwing longeron fasteners, fastener heads, and fastener threads and collars for the airplane groups and configurations identified in paragraphs (h)(6)(ii)(A) through (D) of this AD. For those airplane groups and

configurations, the application of a cap seal to the underwing longeron fasteners at the locations identified in Figures 81 and 144 is required during installation of the underwing longeron and must be applied using a cap sealing procedure with thickness greater than or equal to the dimensions given in Figure 1 to paragraph (h)(3) of this AD.

(A) Groups 7 and 8, Configurations 5 through 8, on the left side.

(B) Group 9, Configurations 1 and 2, on the left side.

(C) Groups 7 and 8, Configurations 2, 6, 10, and 14, on the right side.

(D) Group 9, Configurations 1 and 3, on the right side.

(iii) For any inspection that may require the removal of fastener cap seals, if the cap seal is removed, a cap seal of BMS 5–45 sealant must be reapplied using a cap sealing procedure with a thickness equal to or greater than the dimensions specified in Figure 1 to paragraph (h)(3) of this AD before further flight after completion of the inspection.

(iv) The referenced service information does not require the restoration of any sealant removed to accomplish high frequency eddy current and ultrasonic inspections external to the fuel tank in Figures 1, 7, 11, and 17. Following completion of any inspection required by those figures, replacement of the sealant described in paragraph (h)(6)(iv)(A) and repair of the sealant described in paragraph (h)(6)(iv)(B) of this AD, as applicable, is required.

(A) Where any sealant was removed from the heads of fasteners, before further flight, cover and fillet seal the fasteners using BMS 5–45 or BMS 5–95 sealant.

Note 5 to paragraph (h)(6)(iv)(A): Guidance for accomplishing the actions required by paragraph (h)(6)(iv)(A) of this AD can be found in the Boeing Standard Overhaul Practices Manual (SOPM) section 20–50–19.

(B) Following any sealant replacement required by paragraph (h)(6)(iv)(A) of this AD, where any secondary fuel barrier coating was removed, before further flight, repair the secondary fuel barrier using BMS 5–81 sealant.

Note 6 to paragraph (h)(6)(iv)(B): Guidance for accomplishing the actions required by paragraph (h)(6)(iv)(B) of this AD can be found in Boeing Model 777 Aircraft Maintenance Manual (AMM) section 28–11–00.

(v) The Effectivity of the referenced service information does not include Boeing Model 777F series airplanes having line numbers 1713, 1717, 1720, and 1724 through 1742 inclusive. For those airplanes the applicable actions for Group 6 must be done.

(i) Terminating Action for AD 2023–17–14

For airplanes on which a front spar lower chord modification specified in Boeing Alert Requirements Bulletin 777–57A0122 RB is done as part of the requirements of paragraphs (g) and (h)(6) of this AD, the modification requirements of paragraph (g) of AD 2023–17–14 are terminated for the applicable side (left or right) on which the modification was done.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR–520, Continued Operational Safety Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (k)(1) of this AD. Information may be emailed to: AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, AIR-520, Continued Operational Safety Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(k) Related Information

(1) For more information about this AD, contact Luis Cortez-Muniz, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3958; email: luis.a.cortez-muniz@faa.gov.

(2) Material identified in this AD that is not incorporated by reference is available at the address specified in paragraph (l)(3) of this AD.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin 777-53A0100 RB, dated March 16, 2023.

(ii) Boeing Multi Operator Message MOM-24-0054-01B, dated January 26, 2024.

(3) For Boeing material, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; website myboeingfleet.com.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on August 1, 2024.

Peter A. White,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[FR Doc. 2024-23117 Filed 10-7-24; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1886; Project Identifier AD-2023-00429-T; Amendment 39-22841; AD 2024-18-07]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2009-01-02, which applied to certain Boeing Model 737-600, -700, -700C, -800, and -900 series airplanes. AD 2009-01-02 required an inspection of frames between body station (BS) 360 and BS 907 to determine if certain support brackets of the air conditioning (A/C) outlet extrusions are installed, inspections for cracking of the frames around the attachment holes of the subject brackets, and repair if necessary. AD 2009-01-02 also requires installing new, improved fittings for all support brackets of the A/C outlet extrusions between BS 360 and BS 907. This AD was prompted by numerous reports of multiple cracks in the frame around the attachment holes of the support bracket of the A/C outlet extrusion, and the determination that certain repairs might develop fatigue cracks that could result in the inability of the frame to sustain limit load and therefore must be inspected. This AD would continue to require the actions specified in AD 2009-01-02 and would also require repetitive inspections for cracking of certain repairs, and repair if necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of February 27, 2009 (74 FR 4117, January 23, 2009).

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2023-1886; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments

received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110 SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; website myboeingfleet.com.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at regulations.gov under Docket No. FAA-2023-1886.

FOR FURTHER INFORMATION CONTACT:

Owen F. Bley-Male, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: 206-231-3992; email: Owen.F.Bley-Male@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2009-01-02, Amendment 39-15780 (74 FR 4117, January 23, 2009) (AD 2009-01-02). AD 2009-01-02 applied to certain Boeing Model 737-600, -700, -700C, -800, and -900 series airplanes. The NPRM published in the **Federal Register** on September 25, 2023 (88 FR 65637). The NPRM was prompted by numerous reports of multiple cracks in the frame around the attachment holes of the support bracket of the A/C outlet extrusion and the determination that certain repairs might develop fatigue cracks that could result in the inability of the frame to sustain limit load and therefore must be inspected. In the NPRM, the FAA proposed to continue to require a one-time general visual inspection of frames between BS 360 and BS 907 to determine if certain support brackets of the A/C outlet extrusions are installed; medium- and high-frequency eddy current inspections for cracking of the frames around the attachment holes of the subject brackets; repair if necessary; and installation of new, improved fittings for all support brackets of the A/C outlet extrusions between BS 360 and BS 907. The NPRM also proposed to require repetitive inspections for cracking of certain repairs, and repair if necessary. The FAA is issuing this AD to prevent frame

cracking, which, if not corrected, could lead to a severed frame that, combined with cracking of the chemically milled steps in the skin above the Stringer 10 lap splice, could result in rapid decompression of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from an individual who supported the NPRM without change.

The FAA received additional comments from Aviation Partners Boeing, The Boeing Company (Boeing), Southwest Airlines (SWA), United Airlines (UAL), and an individual. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Determine Estimated Cost

An individual commented that the NPRM stated that there is no definitive data on which to estimate the labor cost (for the repairs), so the basis for this estimated cost is unclear. The commenter suggested an estimate using cost data for operations similar to those required by this AD, making estimates more robust.

The FAA cannot pre-determine on-condition actions before the inspections required by this AD are actually completed. The work-hours to complete repairs will be unique to each airplane. For the other actions required by this AD, the FAA used estimated costs that were provided by the design approval holder. No changes have been made to this AD in this regard.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that incorporation of Supplemental Type Certificate (STC) ST00830SE for installation of blended or split scimitar winglets does not affect the accomplishment of the manufacturer's service instructions.

The FAA agrees with the commenter that STC ST00830SE does not affect the accomplishment of the manufacturer's service instructions. Therefore, the installation of STC ST00830SE does not affect the ability to accomplish the actions required by this AD. The FAA has not changed this AD in this regard.

Request for Correction of the Skin Lap Splice Location

Boeing stated that the NPRM incorrectly identified the location of the skin lap splice. The NPRM referred to "cracking of the skin lap splice above stringer 10." Boeing requested that language be corrected to "cracking of

the chemically milled steps in the skin above Stringer 10 lap splice" to match the language in Boeing Alert Service Bulletin 737-25A1544, Revision 4, dated February 15, 2022.

The FAA agrees with the request and has revised the "Background" section of this final rule and the "Unsafe Condition" in paragraph (e) of this AD accordingly.

Request To Add a General Visual Inspection for Cracks

Boeing noted that Boeing Alert Service Bulletin 737-25A1544, Revision 4, dated February 15, 2022, requires a general visual inspection (GVI) to detect cracks, not just to determine if certain support brackets of the A/C outlet extrusions are installed at certain frames. Boeing requested that a GVI be required to also detect cracks.

The FAA agrees with the request. The inspections specified in Part 2 of Boeing Alert Service Bulletin 737-25A1544, Revision 4, dated February 15, 2022, include a GVI to detect cracks. The "Material Incorporated by Reference under 1 CFR part 51" section of this final rule and paragraph (g)(2) of this AD have been revised to include a GVI as an inspection method.

Request To Revise the Applicability Statement

Boeing stated that paragraph (c), "Applicability," of the proposed AD incorrectly identified the referenced service information as Boeing "Special Attention" Service Bulletin 737-25A1544, Revision 4, dated February 15, 2022, and explained that Revision 4 of this service information is an "alert" service bulletin. The correct reference is Boeing Alert Service Bulletin 737-25A1544, Revision 4, dated February 15, 2022.

The FAA agrees and has revised paragraph (c) of this AD accordingly.

Request To Correct Special Attention Service Bulletin

Boeing stated that a certain Boeing special attention service bulletin is incorrectly identified under "Actions Since AD 2009-01-02 Was Issued" of the NPRM. Boeing pointed out that the NPRM incorrectly identified the service bulletin number as "737-25A1544." The correct service bulletin number is "737-25-1544."

The FAA partially agrees. The FAA agrees that the specified service bulletin number was stated incorrectly in the NPRM. However, since that section of the NPRM is not restated in this final rule, no change is necessary in this regard.

Request To Revise AMOC Provisions

SWA stated that paragraph (j) of the proposed AD requires inspection of repairs installed on the BS 907 frame at the compliance times given in Table 2 of Boeing Alert Service Bulletin 737-25A1544, Revision 4, dated February 15, 2022. SWA mentioned that Table 2 requires post-repair inspections for repairs that were installed per Boeing Special Attention Service Bulletin 737-25-1544, Revision 3, dated May 16, 2016; or Boeing Alert Service Bulletin 737-25A1544, Revision 4, dated February 15, 2022; and does not address repairs that were installed by any other means. SWA proposed revising paragraph (m)(4) of the proposed AD to extend alternative method of compliance (AMOC) approval to paragraph (j) of the proposed AD, provided the AMOC approval contains a damage tolerance evaluation. SWA believes that individually approved repairs that contain an AMOC to AD 2009-01-02, with a damage tolerance analysis as a Category A or Category B repair (as defined in Boeing SRM 51-00-06), provide an equivalent level of safety.

The FAA disagrees with the request. Only repairs installed per Boeing Special Attention Service Bulletin 737-25-1544, Revision 3, dated May 16, 2016; or Boeing Alert Service Bulletin 737-25A1544, Revision 4, dated February 15, 2022; are subject to the requirements of paragraph (j) of this AD. Repairs installed by any other means are not subject to the requirements of paragraph (j) of this AD, so the proposed AMOC to paragraph (j) would not be applicable. The FAA has not changed this AD in this regard.

Request To Clarify Airplanes Affected by New Requirements

UAL supported the NPRM, and requested clarification of the airplanes affected by paragraph (j) of the proposed AD. UAL stated that some airplanes had repairs to the STA 907 frame performed before release of Boeing Special Attention Service Bulletin 737-25-1544, Revision 3, dated May 16, 2016. UAL added that these repairs were coordinated with Boeing and received Form 8100-9 approvals as AMOCs to paragraph (g) of AD 2009-01-02 and are considered Category B damage tolerance repairs that also require additional inspections as defined in the 8100-9 approval. UAL stated that Table 2 of the "Compliance" paragraph of Boeing Alert Service Bulletin 737-25A1544, Revision 4, dated February 15, 2022 (as specified in paragraph (j) of the proposed AD), applies only to airplanes

on which a frame repair has been done at STA 907 in accordance with Boeing Special Attention Service Bulletin 737–25–1544, Revision 3, dated May 16, 2016; or Boeing Alert Service Bulletin 737–25–1544, Revision 4, dated February 15, 2022. UAL therefore stated that Category B repairs via Form 8100–9 should be excluded from paragraph (j) of the proposed AD.

The FAA provides the following clarification. As stated previously, only repairs installed per Boeing Special Attention Service Bulletin 737–25–1544, Revision 3, dated May 16, 2016; or Boeing Alert Service Bulletin 747–25A1544, Revision 4, dated February 15, 2022; are subject to the requirements of paragraph (j) of this AD. Repairs installed by any other means are not subject to the requirements of paragraph (j) of this AD. Therefore, no change to this AD is necessary.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and

determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022. This material specifies procedures for a one-time general visual inspection of frames between BS 360 and BS 907 to determine if certain support brackets of the A/C outlet extrusions are installed; a general visual inspection and low-, medium-, and high-frequency eddy current inspections for cracking of the frames around the attachment holes of the subject brackets, and repair if necessary; and installation of new,

improved fittings for all support brackets of the A/C outlet extrusions between BS 360 and BS 907. This material also specifies procedures for repetitive detailed and high-frequency eddy current inspections for cracking of certain repairs at BS 907 and repair if necessary.

This AD also requires Boeing Special Attention Service Bulletin 737–25–1544, Revision 1, dated January 16, 2008, which the Director of the Federal Register approved for incorporation by reference as of February 27, 2009 (74 FR 4117, January 23, 2009).

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Costs of Compliance

The FAA estimates that this AD affects 738 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
General visual inspection (retained actions from AD 2009-01-02).	1 work-hour × \$85 per hour = \$85	\$0	\$85	\$62,730.
Eddy current inspections (retained actions from AD 2009-01-02).	Up to 216 work-hours × \$85 per hour = Up to \$18,360.	\$0	Up to \$18,360	Up to \$13,549,680.
Replace support fittings (retained actions from AD 2009-01-02).	Up to 346 work-hours × \$85 per hour = Up to \$29,410.	Up to \$28,789 ...	Up to \$58,199	Up to \$42,950,862.
Post-repair inspections (new action)	42 work-hours × \$85 per hour = \$3,570 per inspection cycle.	\$0	\$3,570 per inspection cycle.	\$2,634,660 per inspection cycle.

The FAA has received no definitive data on which to base the cost estimates for the on-condition repairs that would be required based on the results of the inspections specified in this AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an

unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:
Authority: 49 U.S.C. 106(g), 40113, 44701.
- § 39.13 [Amended]
- 2. The FAA amends § 39.13 by:
 - a. Removing Airworthiness Directive (AD) 2009–01–02, Amendment 39–15780 (74 FR 4117, January 23, 2009); and
 - b. Adding the following new AD:
2024–18–07 The Boeing Company:
Amendment 39–22841; Docket No.

FAA–2023–1886; Project Identifier AD–2023–00429–T.

(a) Effective Date

This airworthiness directive (AD) is effective November 12, 2024.

(b) Affected ADs

This AD replaces AD 2009–01–02, Amendment 39–15780 (74 FR 4117, January 23, 2009) (AD 2009–01–02).

(c) Applicability

This AD applies to Boeing Model 737–600, –700, –700C, –800, and –900 series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022.

(d) Subject

Air Transport Association (ATA) of America Code 25, Equipment/Furnishing.

(e) Unsafe Condition

This AD was prompted by numerous reports of multiple cracks in the frame around the attachment holes of the support bracket of the air conditioning (A/C) outlet extrusion. Also, the FAA determined that certain repairs done to comply with AD 2009–01–02 might develop fatigue cracks that could result in the inability of the frame to sustain limit load and must be inspected. The FAA is issuing this AD to address frame cracking, which, if not corrected, could lead to a severed frame that, combined with cracking of the chemically milled steps in the skin above the Stringer 10 lap splice, could result in rapid decompression of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Inspection, With New Material

This paragraph restates the requirements of paragraph (f) of AD 2009–01–02, with new material. Before the accumulation of 36,000 total flight cycles, or within 72 months after February 27, 2009 (the effective date of AD 2009–01–02), whichever occurs later, except as required by paragraph (i) of this AD: Do a general visual inspection to determine if the support brackets of the A/C outlet extrusions between body station (BS) 360 and BS 907 have two-rivet attachment fittings in accordance with Part 2 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737–25–1544, Revision 1, dated January 16, 2008, or Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022; except at the locations identified in the notes of Step 3.B.1 of Part 1 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737–25–1544, Revision 1, dated January 16, 2008, or Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022. As of the effective date of this AD, only use Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022, for the actions required by paragraph (g) of this AD.

(1) For any support bracket attached with three or more rivets: No further action is required by paragraph (g) of this AD.

(2) For any subject support bracket having a two-rivet attachment fitting: Before the accumulation of 36,000 total flight cycles, or within 72 months after February 27, 2009 (the effective date of AD 2009–01–02), whichever occurs later, except as required by paragraph (i) of this AD, do general visual, medium- and high-frequency eddy current inspections for cracking of the frame around the attachment holes of the support bracket, in accordance with Part 2 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737–25–1544, Revision 1, dated January 16, 2008, or do general visual, low-, medium- and high-frequency eddy current inspections for cracking of the frame around the attachment holes of the support bracket, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022. If any cracking is discovered, before further flight, repair the cracking in accordance with Part 3 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737–25–1544, Revision 1, dated January 16, 2008, or Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022, except as required by paragraph (k)(2) of this AD. As of the effective date of this AD, only use Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022, for the actions required by paragraph (g)(2) of this AD.

(h) Retained Modification, With New Material

This paragraph restates the requirements of paragraph (g) of AD 2009–01–02, with new material. Except as required by paragraph (i) of this AD: Before the accumulation of 36,000 total flight cycles, or within 72 months after February 27, 2009 (the effective date of AD 2009–01–02), whichever occurs later, replace the support fittings of all A/C outlet extrusions between BS 360 and BS 907 with new, improved support fittings, in accordance with Part 4 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737–25–1544, Revision 1, dated January 16, 2008, or Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022. As of the effective date of this AD, only use Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022, for the actions required by paragraph (h) of this AD.

(i) Retained Compliance Time for Certain Airplanes, With No Changes

This paragraph restates the compliance time specified in paragraph (h) of AD 2009–01–02, with no changes. For airplanes on which Boeing Business Jet (BBJ) lower cabin altitude modification is incorporated in accordance with Supplemental Type Certificate (STC) ST01697SE (6,500 feet maximum cabin altitude in lieu of 8,000 feet): Before the accumulation of 18,000 total flight cycles, or within 72 months after February 27, 2009 (the effective date of AD 2009–01–02), whichever occurs later, do the actions specified in paragraphs (g) and (h) of this AD.

(j) New Requirements of This AD

For Groups 1 through 4 and Group 6 as identified in Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022: Except as specified in paragraph (k) of this AD: At the applicable time specified in Table 2 of the “Compliance” paragraph of Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022, do a detailed inspection and a high-frequency eddy current inspection for cracking of the repaired area at frame BS 907, and do all applicable repairs before further flight, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022. Repeat the inspections thereafter at the applicable time specified in Table 2 of the “Compliance” paragraph of Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022.

(k) Exceptions to Service Bulletin Specifications

(1) Where the Compliance Time column of Table 2 in the “Compliance” paragraph of Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022, uses the phrase “the Revision 4 date of this Service Bulletin,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022, specifies contacting Boeing, this AD requires repair before further flight using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(3) For airplanes on which BBJ Lower Cabin Altitude STC ST01697SE ([drs.faa.gov/browse/excel/ExternalWindow/0812969A86AF879B8625766400600105.0001](https://www.faa.gov/browse/excel/ExternalWindow/0812969A86AF879B8625766400600105.0001)) has been incorporated, the flight-cycle related compliance times for the inspections required by paragraph (j) of this AD are different from those specified in Table 2 of the “Compliance” paragraph in Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022. All initial compliance times specified in total flight cycles or flight cycles must be reduced to half of those specified in Table 2 of the “Compliance” paragraph in Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022. All repetitive interval compliance times specified in flight cycles must be reduced to one-quarter of those specified in Table 2 of the “Compliance” paragraph in Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022.

(l) Credit for Previous Actions

(1) This paragraph provides credit for the actions specified in paragraphs (g) and (h) of this AD, if those actions were performed before February 27, 2009 (the effective date of AD 2009–01–02), using Boeing Special Attention Service Bulletin 737–25–1544, dated October 4, 2006.

(2) This paragraph provides credit for the actions specified in paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Special Attention Service Bulletin 737–25–1544, Revision 2, dated March 23,

2011; or Boeing Special Attention Service Bulletin 737–25–1544, Revision 3, dated May 16, 2016.

(m) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR–520, Continued Operational Safety Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of AIR–520, Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (n)(1) of this AD. Information may be emailed to: AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, AIR–520, Continued Operational Safety Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved for AD 2009–01–02 are approved as AMOCs for the corresponding provisions of this AD.

(n) Related Information

(1) For more information about this AD, contact Owen F. Bley-Male, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: 206–231–3992; email: Owen.F.Bley-Male@faa.gov.

(2) Material identified in this AD that is not incorporated by reference is available at the address specified in paragraph (o)(5) of this AD.

(o) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following material was approved for IBR on November 12, 2024.

(i) Boeing Alert Service Bulletin 737–25A1544, Revision 4, dated February 15, 2022.

(ii) [Reserved]

(4) The following material was approved for IBR on February 27, 2009 (74 FR 4117, January 23, 2009).

(i) Boeing Special Attention Service Bulletin 737–25–1544, Revision 1, dated January 16, 2008.

(ii) [Reserved]

(5) For Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110–

SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; website myboeingfleet.com.

(6) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(7) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on September 6, 2024.

Peter A. White,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[FR Doc. 2024–23116 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2024–1686; Project Identifier MCAI–2023–00595–R; Amendment 39–22839; AD 2024–18–05]

RIN 2120–AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Airbus Helicopters Model AS332C, AS332C1, AS332L, AS332L1, and SA330J helicopters. This AD was prompted by the installation of unapproved main gearbox (MGB) forward and rear suspension bar attachment plates. This AD requires inspecting or measuring the MGB forward and rear suspension bar attachment plates and, depending on the results, taking corrective action, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 12, 2024.

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA–2024–1686; or in person at Docket Operations between 9 a.m. and

5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the EASA AD, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADS@easa.europa.eu; website: easa.europa.eu. You may find the EASA material on the EASA website at ad.easa.europa.eu.

- You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N–321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222–5110. It is also available at regulations.gov under Docket No. FAA–2024–1686.

Other Related Material: For Airbus Helicopters material identified in this AD, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; phone: (972) 641–0000 or (800) 232–0323; fax: (972) 641–3775; or at airbus.com/en/products-services/helicopters/hcare-services/airbusworld.

FOR FURTHER INFORMATION CONTACT: Hye Yoon Jang, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (206) 231–3758; email: hye.yoon.jang@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Airbus Helicopters Model AS332C, AS332C1, AS332L, AS332L1, and SA330J helicopters. The NPRM published in the **Federal Register** on June 18, 2024 (89 FR 51468). The NPRM was prompted by a series of ADs, the most recent being EASA AD 2023–0076, dated April 11, 2023 (EASA AD 2023–0076), issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition on Airbus Helicopters Model SA 330 J, AS 332 C, AS 332 C1, AS 332 L, and AS 332 L1 helicopters.

In the NPRM, the FAA proposed to require inspecting or measuring the MGB forward and rear suspension bar attachment plates and, depending on the results, taking corrective action. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine EASA AD 2023–0076 in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA–2024–1686.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the EASA AD referenced above. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

Material Incorporated by Reference Under 1 CFR Part 51

EASA AD 2023–0076 requires measuring the thickness of the MGB forward suspension bar attachment plate and inspecting the LH and RH MGB rear suspension bar attachment plates. Depending on the results, EASA AD 2023–0076 requires contacting AH [Airbus Helicopters] for approved corrective action instructions and accomplishing those instructions accordingly.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Material

The FAA reviewed Airbus Helicopters Alert Service Bulletin (ASB) No. AS332–53.02.15, Revision 0, dated March 6, 2023, and ASB No. SA330–53.56, Revision 0, dated April 3, 2023. This material specifies procedures for measuring the thickness of the MGB front suspension bar attachment plate and visually checking the LH and RH MGB rear suspension bar attachment plate versions. Depending on the results, this material specifies procedures for contacting Airbus Helicopter to get an approved repair.

Differences Between This AD and the EASA AD

If, during the inspection or measurement, any discrepancy is detected, EASA AD 2023–0076 specifies contacting AH [Airbus Helicopters] to obtain approved corrective action

instructions and accomplishing those instructions, and the material referenced in EASA AD 2023–0076 specifies contacting Airbus Helicopters to get an approved repair, whereas this AD requires accomplishing the corrective action before further flight in accordance with a method approved by the FAA, EASA, or Airbus Helicopters' EASA Design Organization Approval.

Costs of Compliance

The FAA estimates that this AD affects 38 helicopters of U.S. registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Measuring the thickness of the MGB forward suspension bar attachment plate and inspecting the LH and RH MGB rear suspension bar attachment plates will take approximately 2 work-hours for an estimated cost of \$170 per helicopter and \$6,460 for the U.S. fleet.

The corrective action that may be needed as a result of the inspection or measurement could vary significantly from helicopter to helicopter. The FAA has no data to determine the costs to accomplish the corrective action or the number of helicopters that may require corrective action.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2024–18–05 Airbus Helicopters:

Amendment 39–22839; Docket No. FAA–2024–1686; Project Identifier MCAI–2023–00595–R.

(a) Effective Date

This airworthiness directive (AD) is effective November 12, 2024.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus Helicopters Model AS332C, AS332C1, AS332L, AS332L1, and SA330J helicopters, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 5311, Fuselage Main, Frame.

(e) Unsafe Condition

This AD was prompted by the installation of unapproved main gearbox (MGB) forward and left-hand and right-hand rear suspension bar attachment plates. The FAA is issuing this AD to ensure installation of approved parts. The unsafe condition, if not addressed, could result in damage to the MGB suspension bar attachment plates and surrounding fuselage structure, and subsequent failure of load carrying structural elements.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraphs (h) and (i) of this AD: Comply with all required actions and compliance times specified in, and in accordance with European Union Aviation Safety Agency (EASA) AD 2023–0076, dated April 11, 2023 (EASA AD 2023–0076).

(h) Exceptions to EASA AD 2023–0076

(1) Where EASA AD 2023–0076 requires compliance in terms of flight hours, this AD requires using hours time-in-service.

(2) Where EASA AD 2023–0076 refers to its effective date and March 21, 2023 (the effective date of EASA AD 2023–0049, dated March 7, 2023), this AD requires using the effective date of this AD.

(3) Where paragraph (2) of EASA AD 2023–0076 specifies contacting AH [Airbus Helicopters] for approved corrective action instructions and within the compliance time indicated therein, accomplishing those instructions accordingly and, where the material referenced in paragraph (2) of EASA AD 2023–0076 specifies contacting Airbus Helicopters to get an approved repair, this AD requires, before further flight, corrective action done in accordance with a method approved by the Manager, International Validation Branch, FAA; or EASA; or Airbus Helicopters' EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(4) This AD does not adopt the "Remarks" section of EASA AD 2023–0049.

(i) No Reporting Requirement

Although the material referenced in EASA AD 2023–0076 specifies to submit certain information to the manufacturer, this AD does not require that action.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD or email to: AMOC@faa.gov. If mailing information, also submit information by email.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Additional Information

For more information about this AD, contact Hye Yoon Jang, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (206) 231–3758; email: hye.yoon.jang@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of

the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2023–0076, dated April 11, 2023.

(ii) [Reserved]

(3) For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; website: easa.europa.eu. You may find this EASA material on the EASA website at ad.easa.europa.eu.

(4) You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N–321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222–5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on September 4, 2024.

Victor Wicklund,

Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2024–23137 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA–2024–0218; Project Identifier AD–2023–00779–T; Amendment 39–22836; AD 2024–18–02]

RIN 2120–AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all The Boeing Company Model 787–8, 787–9, and 787–10 airplanes. This AD was prompted by a determination that the flight deck door decompression panel can strike the captain's seat headrest if a flight deck or below the flight deck rapid decompression event occurs when the seat is in a certain position. This AD requires, for certain airplanes, replacing the affected captain's seat assembly. This AD also prohibits the installation of affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 12, 2024.

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA–2024–0218; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110 SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; website myboeingfleet.com.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195. It is also available at regulations.gov under Docket No. FAA–2024–0218.

FOR FURTHER INFORMATION CONTACT:

Nicole S. Tsang, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206–231–3959; email Nicole.S.Tsang@faa.gov.

SUPPLEMENTARY INFORMATION:**Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 787–8, 787–9, and 787–10 airplanes. The NPRM published in the **Federal Register** on February 6, 2024 (89 FR 8109). The NPRM was prompted by a determination that the flight deck door decompression panel can strike the captain's seat headrest if a flight deck or below the flight deck rapid decompression event occurs when the seat is in a certain position. In the NPRM, the FAA proposed to require, for certain airplanes, replacing the affected captain's seat assembly. The FAA also proposed to prohibit the installation of affected parts. The FAA is issuing this AD to address the possibility that the decompression panel could strike the captain's head or face. The unsafe condition, if not addressed, could result in serious or potentially fatal injury to

the captain after a flight deck or below the flight deck rapid decompression event.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Air Line Pilots Association, International (ALPA) and United Airlines who supported the NPRM without change.

The FAA received additional comments from six commenters, including American Airlines, Air France, Boeing, British Airways, KLM Royal Dutch Airlines, and an individual. The following presents the relevant comments received on the NPRM and the FAA's response to each comment.

Request To Change Applicability

American Airlines requested that the applicability of the proposed AD be limited to the Boeing airplanes with line numbers in the effectivity of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023. The commenter stated that the Boeing Illustrated Parts Data (IPD) does not allow the installation of the captain's seat having Ipeco part number (P/N) 3A380-0007-01-7 on Boeing airplanes with line numbers that are not in the effectivity of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023.

The FAA does not agree with the request. As explained in the NPRM, the FAA has determined there is a rotability issue, and the actions required by this AD can be accomplished on Boeing airplanes that are not identified in the effectivity of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023. It is physically possible to install a captain's seat having Boeing P/N S632Z301-21 (Ipeco P/N 3A380-0007-01-7) on airplanes initially delivered with the acceptable seat assemblies. The FAA has not changed this AD in response to this request.

Request for Alternative Method of Compliance

Air France, KLM Royal Dutch Airlines, British Airways, and an individual requested the proposed AD be revised to allow using procedures or modifications similar to those in the existing Boeing Flight Crew Operations Manual (FCOM). Air France requested an alternative method of compliance (AMOC) that could consist of marking limits on the flight deck based on existing Boeing FCOM instructions and

adding procedures (which the commenter stated Boeing is developing) into the Airplane Flight Manual (AFM). KLM Royal Dutch Airlines requested that, as an alternative to the proposed AD, the FAA consider allowing instructions similar to those in the existing Boeing FCOM, along with revising the procedures in the AFM to include installation of a placard limiting seat recline and providing information to aid accurate seat positioning. British Airways noted that the proposed AD allows installing later-approved part numbers and claimed that the later-approved part will be a seat with a placarding solution as proposed by Boeing that will essentially revert the part number back to a "-7." British Airways requested that the proposed AD be revised to allow for the Boeing proposal using a placard as a means of compliance. An individual requested an AMOC-type approach that allows operators to enhance procedural compliance with the existing Boeing FCOM using procedures (including FCOM guidance around limiting the recline/aft movement of the seat), flight deck markings, and crew awareness training. The individual also requested a longer-term approach to the decompression panel issue that allow time for Boeing to come up with a permanent engineering solution to the door panel which will avoid the need to artificially limit the captain's seat recline. Air France stated that the seat modification makes it impossible for pilots to achieve effective rest and may force the operator to add a third pilot on the operated routes or change the Boeing 787 fleet network, which can cause significant costs. KLM Royal Dutch Airlines stated that the seat modification limits seat recline to the point that it reduces the ability for pilots to have a controlled rest, which can negatively affect flight safety. KLM Royal Dutch Airlines suggested that its proposal would achieve the same level of safety as the proposed seat hardware modification. British Airways noted that the mechanical limiting device is more restrictive for tilt and recline than the guidance in Boeing's existing FCOM, meaning pilots can't effectively rest in the operating seat, increasing operational risk due to pilot fatigue. British Airways suggested the increased risk due to pilot fatigue outweighs the low risk of a flight deck decompression while the pilot's seat is in the most rearward and tilted position. The individual stated that the risk analysis appears to be exaggerated given the likelihood of a decompression event occurring with a taller pilot without an

alternative crew member available to safely continue flight, which the commenter stated is not likely given in-service experience of modern jet aircraft. The individual stated that the seat recline is restricted more than what would be required for 99.9% of the pilot cohort to avoid contact with the decompression panel in the event of an in-flight decompression. The individual suggested that the mechanical limiter doesn't account for the fore/aft position of the seat and assumes an absolute worst-case scenario with a pilot in the 0.01 percentile.

The FAA does not agree with the commenters' requests. The FAA evaluated fleet data and determined through risk analysis that the risk to flight crew is unacceptable and that delaying this action would be inappropriate. Additionally, the FAA notes that the flight deck door decompression panel may strike a taller or shorter pilot during a flight deck decompression event because the captain's seat headrest is in the path of the decompression panel when the seat is in the aft track position with full recline and full seat pan tilt. The commenters' proposals do not include supporting data that demonstrates an acceptable level of safety. However, under the provisions of paragraph (k) of this AD, operators may submit AMOC proposals that include supporting data that demonstrates an acceptable level of safety. Regarding a commenter's request to revise the AD to allow Boeing's proposed placard as a means of compliance, the FAA notes that this AD allows installing later-approved parts that meet the criteria specified in paragraph (h)(2) of this AD. A later-approved part may have a placard solution, but a placard solution alone is not the same as a later-approved part. The FAA has not changed this AD in response to these requests.

Request To Clarify Rapid Decompression Event

Boeing requested that the FAA clarify text regarding the rapid decompression event that could lead to the unsafe condition. Boeing requested that the FAA revise the text "flight deck decompression event" to instead say "flight deck or below the flight deck rapid decompression event" when referring to events that could cause the flight deck door decompression panel to strike the captain's seat headrest. Boeing stated that each event would cause the flight deck door to open in the forward direction, either partially or fully.

The FAA agrees with the request for the reasons provided. The FAA has revised this AD accordingly.

Request To Extend the Compliance Time

British Airways requested that the compliance time be extended. British Airways noted that it relies on subcontractor suppliers to modify the seats, with limited extra seats to use while replacement seats are being provided, and the supplier may not have capacity to ramp up to conversion rate. British Airways added that Boeing does not have stock of the captain's seat having Boeing P/N S632Z301-31 (Ipeco P/N 3A380-0007-01-8) to support a fleet-wide campaign within the 3-year compliance time.

The FAA does not agree with the request. After considering all the available information, the FAA has determined that the compliance time, as proposed, represents an appropriate interval of time in which the required actions can be performed in a timely

manner within the affected fleet, while still maintaining an adequate level of safety. In developing an appropriate compliance time, the FAA considered the safety implications, parts availability, and normal maintenance schedules for timely accomplishment of the modifications. The FAA has not changed this AD in response to this request.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023. This material specifies procedures for replacing the affected captain's seat assembly part number (P/N) S632Z301-21 (Ipeco P/N 3A380-0007-01-7) with captain's seat assembly P/N S632Z301-31 (Ipeco P/N 3A380-0007-01-8).

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 155 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement	Up to 3 work-hours × \$85 per hour = \$255.	\$1,335	Up to \$1,590	Up to \$246,450.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2024-18-02 The Boeing Company: Amendment 39-22836; Docket No.

FAA-2024-0218; Project Identifier AD-2023-00779-T.

(a) Effective Date

This airworthiness directive (AD) is effective November 12, 2024.

(b) Affected ADs

This AD affects AD 2016-19-04, Amendment 39-18653 (81 FR 65857, September 26, 2016) (AD 2016-19-04).

(c) Applicability

This AD applies to all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 25, Equipment/furnishings.

(e) Unsafe Condition

This AD was prompted by a determination that the flight deck door decompression panel can strike the captain's seat headrest if a flight deck or below the flight deck rapid decompression event occurs when the seat is in a certain position. The FAA is issuing this AD to address the possibility that the decompression panel could strike the captain's head or face. The unsafe condition, if not addressed, could result in serious or potentially fatal injury to the captain after a flight deck or below the flight deck rapid decompression event.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

For airplanes with an original certificate of airworthiness or original export certificate of airworthiness issued on or before the effective date of this AD, with a seat assembly having Boeing part number (P/N) S632Z301–21 (Ipeco P/N 3A380–0007–01–7) installed on the captain's side: Except as specified by paragraph (h) of this AD, at the applicable times specified in the "Compliance" paragraph of Boeing Special Attention Requirements Bulletin B787–81205–SB250294–00 RB, Issue 001, dated June 14, 2023, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Special Attention Requirements Bulletin B787–81205–SB250294–00 RB, Issue 001, dated June 14, 2023.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Special Attention Service Bulletin B787–81205–SB250294–00, Issue 001, dated June 14, 2023, which is referred to in Boeing Special Attention Requirements Bulletin B787–81205–SB250294–00 RB, Issue 001, dated June 14, 2023.

(h) Exceptions to Service Bulletin Specifications

(1) Where the Boeing Recommended Compliance Time column of the table in the "Compliance" paragraph of Boeing Special Attention Requirements Bulletin B787–81205–SB250294–00 RB, Issue 001, dated June 14, 2023, refers to the Issue 001 date of Requirements Bulletin B787–81205–SB250294–00 RB, this AD requires using the effective date of this AD.

(2) Where Boeing Special Attention Requirements Bulletin B787–81205–SB250294–00 RB, Issue 001, dated June 14, 2023, specifies replacement with captain's seat assemblies having Boeing P/N S632Z301–31 (Ipeco P/N 3A380–0007–01–8), this AD requires installing that part number or a later-approved part number. Later-approved part numbers are only those that are approved as a replacement for the applicable captain's seat assembly and are approved as part of the type design by the FAA or The Boeing Company Organization Designation Authorization (ODA) after June 14, 2023 (the issuance date of Boeing Special Attention Requirements Bulletin B787–81205–SB250294–00 RB, Issue 001).

(i) Terminating Action for Certain Requirements of AD 2016–19–04

Replacement of the captain's seat assembly as required by paragraph (g) of this AD terminates the requirements of paragraph (h)(1) of AD 2016–19–04, for that captain's seat assembly only.

(j) Parts Installation Prohibition

As of the effective date of this AD, no person may install a captain's seat assembly, having Boeing P/N S632Z301–21 (Ipeco P/N 3A380–0007–01–7), on any airplane.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR–520, Continued Operational Safety Branch, FAA, has the

authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (l)(1) of this AD. Information may be emailed to: AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company ODA that has been authorized by the Manager, AIR–520, Continued Operational Safety Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(l) Related Information

(1) For more information about this AD, contact Nicole S. Tsang, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206–231–3959; email Nicole.S.Tsang@faa.gov.

(2) Material identified in this AD that is not incorporated by reference is available at the address specified in paragraph (m)(3) this AD.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Special Attention Requirements Bulletin B787–81205–SB250294–00 RB, Issue 001, dated June 14, 2023.

(ii) [Reserved]

(3) For Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; website myboeingfleet.com.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on September 3, 2024.

Peter A. White,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[FR Doc. 2024–23114 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. **FAA–2024–1003**; Project Identifier **MCAI–2023–00712–T**; Amendment **39–22837**; AD **2024–18–03**]

RIN 2120–AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2023–11–01, which applied to certain Bombardier, Inc., Model BD–100–1A10 airplanes. AD 2023–11–01 required a records check and replacement of affected left-hand (LH) direct current power center (DCPC) units. AD 2023–11–01 also provided optional terminating action for the records check and replacement. This AD was prompted by multiple reports of erratic electrical system status on the push button annunciators (PBAs) and the engine instrument and crew alerting system (EICAS) while on-ground and during flight, and by the determination that certain DCPC units require additional modification or replacement. This AD requires checking maintenance records of certain airplanes, replacing certain DCPC units, and modifying certain DCPC units. This AD also expands the applicability of AD 2023–11–01 and prohibits the installation of affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of August 15, 2023 (88 FR 44042, July 11, 2023).

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. **FAA–2024–1003**; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of

Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Bombardier material identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; website bombardier.com.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at regulations.gov under Docket No. FAA-2024-1003.

FOR FURTHER INFORMATION CONTACT:

Steven Dzierzynski, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2023-11-01, Amendment 39-22446 (88 FR 44042, July 11, 2023) (AD 2023-11-01). AD 2023-11-01 applied to certain Bombardier, Inc., Model BD-100-1A10 airplanes. AD 2023-11-01 required a records check and replacement of affected LH DCPC units, and provided optional terminating action for those actions. The FAA issued AD 2023-11-01 to address erratic indications, which could cause the flight crew to turn off fully-operational electrical power sources, leading to partial or complete loss of electrical power resulting in loss of flight displays and reduced controllability of the airplane.

The NPRM published in the **Federal Register** on April 26, 2024 (89 FR 32380). The NPRM was prompted by AD CF-2023-35, dated May 26, 2023, issued by Transport Canada, which is the aviation authority for Canada (Transport Canada AD CF-2023-35) (also referred to as the MCAI). The MCAI states that airplanes could experience misleading electrical system status indications (PBA and EICAS) as a result of contamination of electrical contacts in the LH DCPC internal communication data bus.

In the NPRM, the FAA proposed to continue to require checking the airplane records and replacement of affected LH DCPC units. The NPRM also proposed to require modification of

certain LH DCPC units, prohibit installation of affected parts, and expand the applicability of AD 2023-11-01. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at regulations.gov under Docket No. FAA-2024-1003.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from Bombardier, Inc. (Bombardier), who also stated its support for the NPRM. The following presents the comment received on the NPRM and the FAA's response to that comment.

Request To Extend the Compliance Time

Bombardier requested that the proposed AD be revised to extend the proposed compliance time to March 31, 2026. Bombardier asserted that, due to changes made in the airplane flight manual (AFM), which introduced the "Unexpected Electrical Indications" procedure instructing pilots not to act on erratic indications related to the electrical power generation and distribution system, the medium risk was mitigated and the severity of a misleading indication event was lowered from potentially catastrophic to major. Even if such events still occur after the implementation of Bombardier Service Bulletins 100-24-30 and 350-24-005, following implementation of the AFM revision, Bombardier considers these events a reliability issue and stated its commitment to work with the supplier to correct the effects of such events. Bombardier further asserted that, when analyzed in conjunction with the probability of occurrence, the risk becomes low. Additionally, Bombardier attested that, based on its provisions, a shorter compliance time will create additional pressure on the U.S. operators, exposing them to a potential grounding scenario, necessitating the need for Bombardier to apply for an alternative method of compliance (AMOC) to support this AD.

The FAA disagrees with the request. Bombardier provided no substantiating data to support the need for an extension of the proposed compliance time. In developing an appropriate compliance time for this action, the FAA considered the safety implications, the time necessary to accomplish the required actions, the availability of required parts, and normal maintenance schedules for timely accomplishment of the required actions. Considering these

items, the FAA has determined that the specified compliance time, as proposed, is appropriate to ensure an acceptable level of safety. The FAA has not changed this AD because of this comment. However, under the provisions of paragraph (m)(1) of this AD, the FAA will consider requests for approval of alternative compliance times if sufficient data are submitted to substantiate that the change would provide an acceptable level of safety.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Bombardier Service Bulletins 100-24-29 and 350-24-004, both Revision 01, both dated July 27, 2023. This material specifies procedures for a records check to determine the total flight hours and replacement of affected LH DCPC units (part numbers 975GC02Y04, 975GC0Y05, 975GC02Y06, and 975GC02Y07). These documents are distinct since they apply to different airplane configurations.

The FAA also reviewed Subject 24-61-01 DC Power Center (DCPC)—Removal/Installation, Chapter 24—Electrical Power, Bombardier Challenger 300 Aircraft Maintenance Manual, Part Two, Publication No. CH 300 AMM, Revision 82, dated November 9, 2023, which specifies:

- procedures for removing DCPC units in Task 24-61-01-000-801 Removal of the DC Power Center (DCPC);
- procedures for installing DCPC units in Task 24-61-01-400-801 Installation of the DC Power Center (DCPC); and
- procedures for testing DCPC units in Task 24-61-01-720-801 Functional Test of the DC Power Center (DCPC).

For obtaining these tasks for the Bombardier Challenger 300 Aircraft Maintenance Manual, Part Two,

Publication No. CH 300 AMM, use Document Identification No. CH 300 AMM.

The FAA also reviewed Subject 24–61–01 DC Power Center (DCPC)—Removal/Installation, Chapter 24—Electrical Power, Bombardier Challenger 350 Aircraft Maintenance Manual, Part Two, Publication No. CH 300 AMM, Revision 38, dated November 9, 2023, which specifies:

- procedures for removing DCPC units in Task 24–61–01–000–801 Removal of the DC Power Center (DCPC);
- procedures for installing DCPC units in Task 24–61–01–400–801

Installation of the DC Power Center (DCPC); and

- procedures for testing DCPC units in Task 24–61–01–720–801 Functional Test of the DC Power Center (DCPC).

For obtaining these tasks for the Bombardier Challenger 350 Aircraft Maintenance Manual, Part Two, Publication No. CH 350 AMM, use Document Identification No. CH 350 AMM.

This AD would also require the following material, which the Director of the Federal Register approved for incorporation by reference as of August 15, 2023 (88 FR 44042, July 11, 2023).

- Bombardier Service Bulletin 100–24–29, dated April 9, 2021.

- Bombardier Service Bulletin 100–24–30, dated November 29, 2022.

- Bombardier Service Bulletin 350–24–004, dated April 9, 2021.

- Bombardier Service Bulletin 350–24–005, dated November 29, 2022.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Costs of Compliance

The FAA estimates that this AD affects 356 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Records check	1 work-hours × \$85 per hour = \$85	\$0	\$85	\$30,260
New actions (modification)	2 work-hours × \$85 per hour = \$170	0	170	60,520

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on

the results of any required actions. The FAA has no way of determining the

number of aircraft that might need this on-condition action:

ESTIMATED COSTS OF ON-CONDITION ACTIONS

Labor cost	Parts cost	Cost per product
7 work-hours × \$85 per hour = \$595	Up to \$35,000	Up to \$35,595.

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators. The FAA does not control warranty coverage for affected operators. As a result, the FAA has included all known costs in the cost estimate.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or

develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by:
 - a. Removing Airworthiness Directive (AD) 2023–11–01, Amendment 39–22446 (88 FR 44042, July 11, 2023); and
 - b. Adding the following new AD:

2024–18–03 Bombardier, Inc.: Amendment 39–22837; Docket No. FAA–2024–1003; Project Identifier MCAI–2023–00712–T.

(a) Effective Date

This airworthiness directive (AD) is effective November 12, 2024.

(b) Affected ADs

This AD replaces AD 2023–11–01, Amendment 39–22446 (88 FR 44042, July 11, 2023) (AD 2023–11–01).

(c) Applicability

This AD applies to all Bombardier, Inc., Model BD-100-1A10 airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 24, Electrical Power.

(e) Unsafe Condition

This AD was prompted by multiple reports of erratic electrical system status on the push button annunciators (PBAs) and the engine instrument and crew alerting system (EICAS) while on-ground and during flight, and by the determination that certain direct current power center (DCPC) units require additional modification or replacement. The FAA is issuing this AD to address erratic indications, which could cause the flightcrew to turn off fully operational electrical power sources, leading to partial or complete loss of electrical power. The unsafe condition, if not addressed, could result in loss of flight displays and reduced controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Records Check

For any left-hand (LH) DCPC unit having part number (P/N) 975GC02Y04, 975GC02Y05, 975GC02Y06, or 975GC02Y07 that was not cleaned before the effective date of this AD as specified in Safran Service Bulletin 975GC02Y-24-018 or replaced before the effective date of this AD as specified in Bombardier Service Bulletin 100-24-29 or Bombardier Service Bulletin 350-24-004: Within 60 days after the effective date of this AD, verify the total flight hours of the LH DCPC unit since the date of manufacture by doing a records check in accordance with paragraph 2.B.(1) of the Accomplishment Instructions of the applicable service bulletin identified in paragraphs (g)(1) and (2) of this AD.

(1) For airplanes having serial numbers 20001 through 20500 inclusive, use Bombardier Service Bulletin 100-24-29, dated April 9, 2021; or Revision 01, dated July 27, 2023. As of the effective date of this AD, use only Bombardier Service Bulletin 100-24-29, Revision 01, dated July 27, 2023.

(2) For airplanes having serial numbers 20501 through 20999 inclusive, use Bombardier Service Bulletin 350-24-004, dated April 9, 2021; or Revision 01, dated July 27, 2023. As of the effective date of this AD, use only Bombardier Service Bulletin 350-24-004, Revision 01, dated July 27, 2023.

(h) Replacement of the LH DCPC

If, during the records check required by paragraph (g) of this AD, the total flight hours since date of manufacture of the LH DCPC unit is equal to or more than 3,500 total flight hours as of the effective date of this AD, and the LH DCPC was not previously cleaned as specified in Safran Service Bulletin 975GC02Y-24-018, or replaced as specified in Bombardier Service Bulletin 100-24-29 or

Bombardier Service Bulletin 350-24-004: Within 12 months after the effective date of this AD, remove, replace with LH DCPC P/N 975GC02Y08, test the DCPC logic and protection cards, and do the functional test for the LH DCPC unit, in accordance with the applicable service information specified in paragraphs (h)(1) through (8) of this AD. If any test fails, do corrective actions, and repeat the test before further flight until the test passes.

(1) Task 24-61-01-000-801 Removal of the DC Power Center (DCPC), Subject 24-61-01 DC Power Center (DCPC)—Removal/Installation, Chapter 24—Electrical Power, Bombardier Challenger 300 Aircraft Maintenance Manual, Part Two, Publication No. CH 300 AMM, Revision 82, dated November 9, 2023.

(2) Task 24-61-01-000-801 Removal of the DC Power Center (DCPC), Subject 24-61-01 DC Power Center (DCPC)—Removal/Installation, Chapter 24—Electrical Power, Bombardier Challenger 350 Aircraft Maintenance Manual, Part Two, Publication No. CH 350 AMM, Revision 38, dated November 9, 2023.

(3) Task 24-61-01-400-801 Installation of the DC Power Center (DCPC), Subject 24-61-01 DC Power Center (DCPC)—Removal/Installation, Chapter 24—Electrical Power, Bombardier Challenger 300 Aircraft Maintenance Manual, Part Two, Publication No. CH 300 AMM, Revision 82, dated November 9, 2023.

(4) Task 24-61-01-400-801 Installation of the DC Power Center (DCPC), Subject 24-61-01 DC Power Center (DCPC)—Removal/Installation, Chapter 24—Electrical Power, Bombardier Challenger 350 Aircraft Maintenance Manual, Part Two, Publication No. CH 350 AMM, Revision 38, dated November 9, 2023.

(5) For airplanes having serial number 20001 through 20500 inclusive, use paragraph 2.D. of the Accomplishment Instructions of Bombardier Service Bulletin 100-24-30, dated November 29, 2022.

(6) For airplanes having serial number 20501 through 20999 inclusive, use paragraph 2.D. of the Accomplishment Instructions of Bombardier Service Bulletin 350-24-005, dated November 29, 2022.

(7) Task 24-61-01-720-801 Functional Test of the DC Power Center (DCPC), Subject 24-61-01 DC Power Center (DCPC)—Adjustment/Test, Chapter 24—Electrical Power, Bombardier Challenger 300 Aircraft Maintenance Manual, Part Two, Publication No. CH 300 AMM, Revision 82, dated November 9, 2023.

(8) Task 24-61-01-720-801 Functional Test of the DC Power Center (DCPC), Subject 24-61-01 DC Power Center (DCPC)—Adjustment/Test, Chapter 24—Electrical Power, Bombardier Challenger 350 Aircraft Maintenance Manual, Part Two, Publication No. CH 350 AMM, Revision 38, dated November 9, 2023.

(i) Exception to the Service Information

Although the note in paragraph 2.B.(4) of the Accomplishment Instructions of Bombardier Service Bulletin 100-24-29, dated April 9, 2021, and Revision 01, dated July 27, 2023; and Bombardier Service

Bulletin 350-24-004, dated April 9, 2021, and Revision 01, dated July 27, 2023, specify that actions will reset “the unit total flight hours to zero at date of incorporation,” this AD does not include that requirement.

(j) Modification

For LH DCPC P/N 975GC02Y07 units that were cleaned before the effective date of this AD as specified in Safran Service Bulletin 975GC02Y-24-018, or replaced before the effective date of this AD as specified in Bombardier Service Bulletin 100-24-29 or Bombardier Service Bulletin 350-24-004: Within 12 months after the effective date of this AD, modify each LH DCPC P/N 975GC02Y07 into LH DCPC P/N 975GC02Y08, in accordance with paragraph 2.C. of the Accomplishment Instructions of the applicable service bulletin identified in paragraph (j)(1) or (2) of this AD. Before further flight after the modification, test the DCPC logic and protection cards in accordance with paragraph 2.D. of the Accomplishment Instructions of the applicable service bulletin identified in paragraph (j)(1) or (2) of this AD, and do the functional test for the LH DCPC unit, in accordance with the applicable service information specified in paragraph (j)(3) or (4) of this AD. If any test fails, do corrective actions, and repeat the test before further flight until the test passes.

(1) For airplanes having serial number 20001 through 20500 inclusive, use Bombardier Service Bulletin 100-24-30, dated November 29, 2022.

(2) For airplanes having serial number 20501 through 20999 inclusive, use Bombardier Service Bulletin 350-24-005, dated November 29, 2022.

(3) Task 24-61-01-720-801 Functional Test of the DC Power Center (DCPC), Subject 24-61-01 DC Power Center (DCPC)—Adjustment/Test, Chapter 24—Electrical Power, Bombardier Challenger 300 Aircraft Maintenance Manual, Part Two, Publication No. CH 300 AMM, Revision 82, dated November 9, 2023.

(4) Task 24-61-01-720-801 Functional Test of the DC Power Center (DCPC), Subject 24-61-01 DC Power Center (DCPC)—Adjustment/Test, Chapter 24—Electrical Power, Bombardier Challenger 350 Aircraft Maintenance Manual, Part Two, Publication No. CH 350 AMM, Revision 38, dated November 9, 2023.

(k) Replacement of Certain LH DCPC P/N 975GC02Y04, 975GC02Y05, and 975GC02Y06

For LH DCPC P/N 975GC02Y04, 975GC02Y05, and 975GC02Y06 that were cleaned before the effective date of this AD as specified in Safran Service Bulletin 975GC02Y-24-018, or replaced before the effective date of this AD as specified in Bombardier Service Bulletin 100-24-29 or Bombardier Service Bulletin 350-24-004: Within 12 months after the effective date of this AD, remove, replace with LH DCPC P/N 975GC02Y08, test the DCPC logic and protection cards, and do the functional test for the LH DCPC unit, in accordance with the applicable material specified in paragraphs (h)(1) through (8) of this AD. If any test fails,

do corrective actions, and repeat the test before further flight until the test passes.

(l) Parts Installation Prohibition

As of 60 days from the effective date of this AD, it is prohibited to install an LH DCPC with P/N 975GC02Y04, 975GC02Y05, 975GC02Y06, or 975GC02Y07, on any airplane.

(m) Additional AD Provisions

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (n) of this AD. Information may be emailed to: 9-AVS-NYACO-COS@faa.gov.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or Transport Canada; or Bombardier, Inc.'s Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(n) Additional Information

For more information about this AD, contact Steven Dzierzynski, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

(o) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following material was approved for IBR on November 12, 2024.

(i) Bombardier Service Bulletin 100-24-29, Revision 01, dated July 27, 2023.

(ii) Bombardier Service Bulletin 350-24-004, Revision 01, dated July 27, 2023.

(iii) Subject 24-61-01 DC Power Center (DCPC)—Removal/Installation, Chapter 24—Electrical Power, Bombardier Challenger 300 Aircraft Maintenance Manual, Part Two, Publication No. CH 300 AMM, Revision 82, dated November 9, 2023:

(A) Task 24-61-01-000-801 Removal of the DC Power Center (DCPC);

(B) Task 24-61-01-400-801 Installation of the DC Power Center (DCPC); and

(C) Task 24-61-01-720-801 Functional Test of the DC Power Center (DCPC).

Note 1 to paragraph (o)(3)(iii): For obtaining the tasks specified in the Bombardier Challenger 300 Aircraft Maintenance Manual, Part Two, Publication No. CH 300 AMM, use Document Identification No. CH 300 AMM.

(iv) Subject 24-61-01 DC Power Center (DCPC)—Removal/Installation, Chapter 24—Electrical Power, Bombardier Challenger 350

Aircraft Maintenance Manual, Part Two, Publication No. CH 350 AMM, Revision 38, dated November 9, 2023:

(A) Task 24-61-01-000-801 Removal of the DC Power Center (DCPC);

(B) Task 24-61-01-400-801 Installation of the DC Power Center (DCPC); and

(C) Task 24-61-01-720-801 Functional Test of the DC Power Center (DCPC).

Note 2 to paragraph (o)(3)(iv): For obtaining the tasks specified in the Bombardier Challenger 350 Aircraft Maintenance Manual, Part Two, Publication No. CH 350 AMM, use Document Identification No. CH 350 AMM.

(4) The following material was approved for IBR on August 15, 2023 (88 FR 44042, July 11, 2023).

(i) Bombardier Service Bulletin 100-24-29, dated April 9, 2021.

(ii) Bombardier Service Bulletin 100-24-30, dated November 29, 2022.

(iii) Bombardier Service Bulletin 350-24-004, dated April 9, 2021.

(iv) Bombardier Service Bulletin 350-24-005, dated November 29, 2022.

(5) For Bombardier material identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; website bombardier.com.

(6) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(7) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on September 3, 2024.

Victor Wicklund,

Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2024-23113 Filed 10-7-24; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-0227; Project Identifier MCAI-2023-00886-T; Amendment 39-22838; AD 2024-18-04]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD-700-2A12

airplanes. This AD was prompted by a report indicating that the fan in a transformer rectifier unit (TRU) can become inoperative in a manner that is not detectable by the fan monitoring circuit. This AD requires replacement of the existing TRU Number 2 with a new part number that incorporates a correction to the fan and the monitoring circuit. This AD also prohibits the installation of affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 12, 2024.

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2024-0227; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Bombardier material identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; website bombardier.com.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at regulations.gov under Docket No. FAA-2024-0227.

FOR FURTHER INFORMATION CONTACT: William Reisenauer, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model BD-700-2A12 airplanes. The NPRM published in the **Federal Register** on February 14, 2024 (89 FR 11228). The

NPRM was prompted by AD CF–2023–53, dated July 14, 2023, issued by Transport Canada, which is the aviation authority for Canada (referred to after this as the MCAI). The MCAI states that the fan in a TRU can become inoperative in a manner that is not detectable by the fan monitoring circuit. An inoperative fan leads to higher TRU operating temperatures, which can trigger the activation of the load shed function to reduce the electrical load and temperature in the TRU. If the TRU temperature continues to rise and exceeds the maximum temperature threshold, the TRU will automatically disconnect. The shed electrical load will be transferred to the remaining two TRUs, which could lead to overheating and cascading failures on the remaining TRUs.

In the NPRM, the FAA proposed to require replacement of the existing TRU Number 2 with a new part number that incorporates a correction to the fan and the monitoring circuit. The NPRM also proposed to prohibit the installation of affected parts. The FAA is issuing this AD to address the inability of a TRU to detect the fan failure. The unsafe condition, if not addressed, could lead to overheating and failures on the remaining TRUs, which could contribute to additional pilot workload and adversely affect the safe operation of the airplane.

You may examine the MCAI in the AD docket at *regulations.gov* under Docket No. FAA–2024–0227.

Discussion of Final Airworthiness Directive Comments

The FAA received comments from NetJets Inc. The following presents the comments received on the NPRM and the FAA’s response to the comments.

Request To Update the Service Bulletin to the Latest Revision

NetJets requested that paragraphs (g) and (i) of the proposed AD be revised

to change Bombardier Service Bulletin 700–24–7507, Revision 1, dated May 19, 2023, to Bombardier Service Bulletin 700–24–7507, Revision 2, dated October 16, 2023.

The FAA agrees with the request. For airplanes on which the actions of Revision 1 of the service bulletin have already been done, no more work is required by Revision 2. The FAA clarified with Bombardier that credit can be given for the accomplishment of actions specified in Bombardier Service Bulletin 700–24–7507, Revision 1, dated May 19, 2023. The FAA has therefore revised this AD to require Revision 2 and to add credit in paragraph (i) of this AD for accomplishment of the actions specified in Bombardier Service Bulletin 700–24–7507, Revision 1, dated May 19, 2023, if completed before the effective date of this AD.

Request for Allowance To Install Part Number G02404521–001 for TRU Number 1 and Number 3

NetJets noted that the Bombardier Service Bulletin 700–24–7507, Revision 2, dated October 16, 2023, limits the installation of TRU part number (P/N) G02404521–001 to the Number 2 position. NetJets requested that an exception be added to paragraph (h) of the proposed AD to also allow the installation of TRU P/N G02404521–001 for TRU Number 1 and TRU Number 3.

The FAA does not agree to allow installation of TRU P/N G02404521–001 for TRU Number 1 or Number 3. The TRU P/N G02404521–001 design fails to detect a fan failure. Bombardier Service Bulletin 700–24–7507, Revision 2, dated October 16, 2023, replaces only TRU Number 2 position because it has a higher electrical load and is more susceptible to the fan inoperative condition. TRU P/N G02404521–001 is no longer manufactured. The new production airplanes are all installed with TRU P/N G02404521–003. All TRUs that are removed from service (e.g., for repair) are upgraded to TRU P/N G02404521–003. Therefore, this AD

has not been changed regarding this request.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Bombardier Service Bulletin 700–24–7507, Revision 2, dated October 16, 2023. This material specifies procedures for replacing the existing TRU Number 2 P/N G02404521–001 with new P/N G02404521–003, including removal of the secondary layer of insulation blanket ENM386519113C or P/N ENM386519113D in front of the TRU Number 2 fan air inlet, reidentifying the blanket installation by ink stamp, checking the electrical bond resistance for TRU Number 2, and performing the operational test.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Costs of Compliance

The FAA estimates that this AD affects 56 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 5 work-hours × \$85 per hour = Up to \$425	Up to \$34,754	Up to \$35,179	Up to \$1,970,024.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more

detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil

aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2024–18–04 Bombardier, Inc.: Amendment 39–22838; Docket No. FAA–2024–0227; Project Identifier MCAI–2023–00886–T.

(a) Effective Date

This airworthiness directive (AD) is effective November 12, 2024.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc., Model BD–700–2A12 airplanes, certificated in any category, serial numbers 70006 through 70166 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 24, Electrical power.

(e) Unsafe Condition

This AD was prompted by a report that the fan in a transformer rectifier unit (TRU) can become inoperative in a manner that is not detectable by the fan monitoring circuit. The FAA is issuing this AD to address the inability of a TRU to detect the fan failure. The unsafe condition, if not addressed, could lead to overheating and failures on the remaining TRUs, which could contribute to additional pilot workload and adversely affect the safe operation of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Transformer Rectifier Unit (TRU) Number 2 Replacement

Within 1,500 flight hours or 3 years, whichever occurs first after the effective date of this AD, replace TRU Number 2 part number (P/N) G02404521–001 with P/N G02404521–003, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 700–24–7507, Revision 2, dated October 16, 2023.

(h) Parts Installation Prohibition

As of the effective date of this AD, no person may install, on any airplane, a TRU part number G02404521–001.

(i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 700–24–7507, dated March 31, 2023, or Bombardier Service Bulletin 700–24–7507, Revision 1, dated May 19, 2023.

(j) Special Flight Permits

Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the airplane to a location where the actions required by this AD can be accomplished, provided no passengers and only essential crew are on board, and day visual flight rules are used.

(k) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (l)(2) of this AD. Information may be emailed to: 9-AVS-NYACO-COS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or Transport Canada or Bombardier, Inc.’s Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(l) Additional Information

(1) For more information about this AD, contact William Reisenauer, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7300; email 9-avs-nyaco-cos@faa.gov.

(2) Material identified in this AD that is not incorporated by reference is available at the addresses specified in paragraph (m)(3) of this AD.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 700–24–7507, Revision 2, dated October 16, 2023.

(ii) [Reserved]

(3) For Bombardier material identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514–855–2999; email ac.yul@aero.bombardier.com; website bombardier.com.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on September 4, 2024.

Victor Wicklund,

Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2024–23115 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-1484; Project Identifier MCAI-2023-00968-A; Amendment 39-22834; AD 2024-17-09]

RIN 2120-AA64

Airworthiness Directives; Embraer S.A. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Embraer S.A. (Embraer) Model EMB-505 airplanes. This AD was prompted by analysis of the left-hand (LH) refreshment center and LH forward cabinet that identified the need for installing structural reinforcements. This AD requires installing structural reinforcements as specified in an Agência Nacional de Aviação Civil (ANAC) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 12, 2024.

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-1484; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For ANAC material identified in this AD, contact ANAC, Continuing Airworthiness Technical Branch (GTAC), Rua Doutor Orlando Feirabend

Filho, 230—Centro Empresarial Aquarius—Torre B—Andares 14 a 18, Parque Residencial Aquarius, CEP 12.246-190—São José dos Campos—SP, Brazil; phone: 55 (12) 3203-6600; email: pac@anac.gov.br; website: anac.gov.br/en/. You may find this material on the ANAC website at sistemas.anac.gov.br/certificacao/DA/DAE.asp. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-1484.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-1484.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (816) 329-4165; email: jim.rutherford@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain serial-numbered Embraer Model EMB-505 airplanes. The NPRM published in the **Federal Register** on June 20, 2024 (89 FR 51853). The NPRM was prompted by ANAC AD 2023-07-01, effective August 10, 2023, as corrected by ANAC Airworthiness Directive Errata, effective August 10, 2023 (ANAC AD 2023-07-01) (also referred to as the MCAI) issued by National Civil Aviation Agency of Brazil, which is the aviation authority for Brazil. The MCAI states that analysis identified that the LH refreshment center and LH forward cabinet might not withstand the loads expected for specific emergency landing conditions, which may cause the detachment of mass items and cause injuries to the airplane occupants. In addition, the MCAI includes errata to correct a printing error in the original English version of the MCAI. The MCAI requires installing structural reinforcements.

In the NPRM, the FAA proposed to require installing structural reinforcements, as specified in ANAC AD 2023-07-01. The FAA is issuing

this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-1484.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed ANAC AD 2023-07-01, which specifies procedures for installing structural reinforcements.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Differences Between This AD and the MCAI

The material specified in ANAC AD 2023-07-01 allows the use of alternative or similar parts in place of the ones specified in the kits, provided these alternative or similar parts are approved by Embraer, but this AD requires approval from either the Manager, International Validation Branch, FAA; ANAC; or ANAC's authorized Designee.

Costs of Compliance

The FAA estimates that this AD affects 229 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Install structural reinforcements	11 work-hours × \$85 per hour = \$935	\$1,600	\$2,535	\$580,515

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2024-17-09 Embraer S.A.: Amendment 39-22834; Docket No. FAA-2024-1484; Project Identifier MCAI-2023-00968-A.

(a) Effective Date

This airworthiness directive (AD) is effective November 12, 2024.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Embraer S.A. Model EMB-505 airplanes, certificated in any category, as identified in Agência Nacional de Aviação Civil (ANAC) AD 2023-07-01, effective August 10, 2023, as corrected by ANAC Airworthiness Directive Errata, effective August 10, 2023 (ANAC AD 2023-07-01).

(d) Subject

Joint Aircraft System Component (JASC) Code 2500, Cabin Equipment/Furnishings.

(e) Unsafe Condition

This AD was prompted by an analysis that the left-hand (LH) refreshment center and LH forward cabinet might not withstand the loads expected for specific emergency landing conditions. The FAA is issuing this AD to address the possibility of detachment of mass items during specific emergency landing conditions. The unsafe condition, if not addressed, could result in injuries to the airplane occupants.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified in paragraphs (h) and (i) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, ANAC AD 2023-07-01.

(h) Exceptions to ANAC AD 2023-07-01

(1) Where ANAC AD 2023-07-01 refers to its effective date, this AD requires using the effective date of this AD.

(2) Although the material referenced in ANAC AD 2023-07-01 allows the use of alternative or similar parts in place of the ones specified in the kits provided, this AD requires that alternative or similar parts be approved by the Manager, International Validation Branch, FAA; ANAC; or ANAC's authorized Designee. If approved by the ANAC Designee, the approval must include the Designee's authorized signature.

(3) Where the material referenced in ANAC AD 2023-07-01 specifies to "discard" certain parts, for this AD replace that text with "remove from service."

(4) This AD does not adopt paragraphs (c) and (d) of ANAC AD 2023-07-01.

(i) No Reporting Requirement

Although the material referenced in ANAC AD 2023-07-01 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Alternative Methods of Compliance (AMOCs)

The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (k) of this AD or email to: AMOC@faa.gov. If mailing information, also submit information by email. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local Flight Standards District Office/certificate holding district office.

(k) Additional Information

For more information about this AD, contact Jim Rutherford, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (816) 329-4165; email: jim.rutherford@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Agência Nacional de Aviação Civil (ANAC) AD 2023-07-01, effective August 10, 2023, as corrected by ANAC Airworthiness Directive Errata, effective August 10, 2023.

(ii) [Reserved]

(3) For ANAC material identified in this AD, contact ANAC, Continuing Airworthiness Technical Branch (GTAC), Rua Doutor Orlando Feirabend Filho, 230—Centro Empresarial Aquarius—Torre B—Andares 14 a 18, Parque Residencial Aquarius, CEP 12.246-190—São José dos Campos—SP, Brazil; phone: 55 (12) 3203-6600; email: pac@anac.gov.br; website: anac.gov.br/en/. You may find this material on the ANAC website at sistemas.anac.gov.br/certificacao/DA/DAE.asp.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on October 3, 2024.

Steven W. Thompson,

Acting Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2024–23248 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2024–0517; Airspace Docket No. 23–AGL–41]

RIN 2120–AA66

Amendment of Very High Frequency Omnidirectional Range (VOR) Federal Airways V–233 and V–420; Gaylord, MI

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action amends Very High Frequency Omnidirectional Range (VOR) Federal Airways V–233 and V–420 in the vicinity of Gaylord, MI. The FAA is taking this action due to the planned decommissioning of the VOR portion of the Gaylord, MI (GLR), VOR/Distance Measuring Equipment (VOR/DME) navigational aid (NAVAID). The Gaylord VOR is being decommissioned as part of the FAA’s VOR Minimum Operational Network (MON) program.

DATES: Effective date 0901 UTC, December 26, 2024. The Director of the Federal Register approves this incorporation by reference action under 1 CFR part 51, subject to the annual revision of FAA Order JO 7400.11 and publication of conforming amendments.

ADDRESSES: A copy of the Notice of Proposed Rulemaking (NPRM), all comments received, this final rule, and all background material may be viewed online at www.regulations.gov using the FAA Docket number. Electronic retrieval help and guidelines are available on the website. It is available 24 hours each day, 365 days each year.

FAA Order JO 7400.11J, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at www.faa.gov/air_traffic/publications/. You may also contact the Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 600 Independence Avenue SW, Washington, DC 20597; telephone: (202) 267–8783.

FOR FURTHER INFORMATION CONTACT: Colby Abbott, Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 600

Independence Avenue SW, Washington, DC 20597; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The FAA’s authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency’s authority. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it modifies the National Airspace System (NAS) as necessary to preserve the safe and efficient flow of air traffic.

History

The FAA published a notice of proposed rulemaking for Docket No. FAA–2024–0517 in the **Federal Register** (89 FR 18854; March 15, 2024), proposing to amend VOR Federal Airways V–233 and V–420 in the vicinity of Gaylord, MI, due to the planned decommissioning of the VOR portion of the Gaylord, MI, VOR/DME NAVAID. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal. No comments were received.

Incorporation by Reference

VOR Federal Airways are published in paragraph 6010(a) of FAA Order JO 7400.11, Airspace Designations and Reporting Points, which is incorporated by reference in 14 CFR 71.1 on an annual basis. This document amends the current version of that order, FAA Order JO 7400.11J, dated July 31, 2024, and effective September 15, 2024. FAA Order JO 7400.11J is publicly available as listed in the **ADDRESSES** section of this document. These amendments will be published in the next update to FAA Order JO 7400.11.

FAA Order JO 7400.11J lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

This action amends 14 CFR part 71 by amending VOR Federal Airways V–233 and V–420 due to the planned decommissioning of the VOR portion of the Gaylord, MI, VOR/DME. The airway actions are described below.

V–233: V–233 extends between the Spinner, IL (SPI), VOR/Tactical Air

Navigation (VORTAC) and the Roberts, IL (RBS), VOR/DME; and between the Mount Pleasant, MI (MOP), VOR/DME and the Pellston, MI (PLN), VORTAC. The airway segment between the Mount Pleasant VOR/DME and the Pellston VORTAC is removed. As amended, the airway is changed to now extend between the Spinner VORTAC and the Roberts VOR/DME.

V–420: V–420 extends between the Green Bay, WI (GRB), VORTAC and the Alpena, MI (APN), VORTAC. The airway segment between the Traverse City, MI (TVC), VOR/DME and the Alpena VORTAC is removed. As amended, the airway is changed to now extend between the Green Bay VORTAC and the Traverse City VOR/DME.

The NAVAID radials listed in the V–233 description in the regulatory text of this final rule are unchanged and stated in degrees True north.

Regulatory Notices and Analyses

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore: (1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that only affects air traffic procedures and air navigation, it is certified that this rule, when promulgated, does not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

The FAA has determined that this action amending VOR Federal Airways V–233 and V–420, due to the planned decommissioning of the VOR portions of the Gaylord, MI, VOR/DME NAVAID, qualifies for categorical exclusion under the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*) and its implementing regulations at 40 CFR part 1500, and in accordance with FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, paragraph 5–6.5a, which categorically excludes from further environmental impact review rulemaking actions that designate or modify classes of airspace areas, airways, routes, and reporting points (see 14 CFR part 71, Designation of Class A, B, C, D, and E Airspace Areas; Air Traffic Service Routes; and Reporting Points); and paragraph 5–6.5i,

which categorically excludes from further environmental impact review the establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima. As such, this action is not expected to result in any potentially significant environmental impacts. In accordance with FAA Order 1050.1F, paragraph 5–2 regarding Extraordinary Circumstances, the FAA has reviewed this action for factors and circumstances in which a normally categorically excluded action may have a significant environmental impact requiring further analysis. The FAA has determined that no extraordinary circumstances exist that warrant preparation of an environmental assessment or environmental impact study.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for 14 CFR part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order JO 7400.11], Airspace Designations and Reporting Points, dated July 31, 2024, and effective September 15, 2024, is amended as follows:

Paragraph 6010(a) Domestic VOR Federal Airways.

* * * * *

V–233 [Amended]

From Spinner, IL; INT Spinner 061° and Roberts, IL, 233° radials; to Roberts.

* * * * *

V–420 [Amended]

From Green Bay, WI; to Traverse City, MI.

* * * * *

Issued in Washington, DC, on October 2, 2024.

Frank Lias,

Manager, Rules and Regulations Group.

[FR Doc. 2024–23203 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2024–1048; Airspace Docket No. 24–AGL–1]

RIN 2120–AA66

Amendment of Jet Routes J–35 and J–101; Amendment VOR Federal Airways V–9, V–48, V–69, V–227, and V–313; and Revocation of VOR Federal Airway V–586 in the Vicinity of Pontiac, IL

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action amends Jet Routes J–35 and J–101; amends Very High Frequency Omnidirectional Range (VOR) Federal Airways V–9, V–48, V–69, V–227, and V–313; and revokes VOR Federal Airway V–586. The FAA is taking this action due to the planned decommissioning of the VOR portion of the Pontiac, IL (PNT), VOR/Distance Measuring Equipment (VOR/DME) navigational aid (NAVAID). The Pontiac VOR is being decommissioned in support of the FAA’s VOR Minimum Operational Network (MON) program.

DATES: Effective date 0901 UTC, December 26, 2024. The Director of the Federal Register approves this incorporation by reference action under 1 CFR part 51, subject to the annual revision of FAA Order JO 7400.11 and publication of conforming amendments.

ADDRESSES: A copy of the Notice of Proposed Rulemaking (NPRM), all comments received, this final rule, and all background material may be viewed online at www.regulations.gov using the FAA Docket number. Electronic retrieval help and guidelines are available on the website. It is available 24 hours each day, 365 days each year.

FAA Order JO 7400.11J, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at www.faa.gov/air_traffic/publications/. You may also contact the Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 600 Independence Avenue SW, Washington, DC 20597; telephone: (202) 267–8783.

FOR FURTHER INFORMATION CONTACT:

Colby Abbott, Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 600 Independence Avenue SW, Washington, DC 20597; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The FAA’s authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency’s authority. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it modifies the National Airspace System as necessary to preserve the safe and efficient flow of air traffic.

History

The FAA published a notice of proposed rulemaking for Docket No. FAA–2024–1048 in the **Federal Register** (89 FR 31667; April 25, 2024), proposing to amend Jet Routes J–35 and J–101; amend VOR Federal Airways V–9, V–48, V–69, V–227, and V–313; and revoke VOR Federal Airway V–586 due to the planned decommissioning of the VOR portion of the Pontiac, IL, VOR/DME NAVAID. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal. No comments were received.

Differences From the NPRM

Subsequent to the NPRM, the FAA published a rule for Docket No. FAA–2023–2483 in the **Federal Register** (89 FR 48504; June 7, 2024), amending VOR Federal Airway V–48 by removing the airway segment between the Ottumwa VOR/DME and the Burlington, IA, VOR/DME. That airway amendment, effective September 5, 2024, is included in this rule.

Incorporation by Reference

Jet Routes are published in paragraph 2004 and VOR Federal Airways are published in paragraph 6010(a) of FAA Order JO 7400.11, Airspace Designations and Reporting Points, which is incorporated by reference in 14 CFR 71.1 on an annual basis. This document amends the current version of that order, FAA Order JO 7400.11J,

dated July 31, 2024, and effective September 15, 2024. FAA Order JO 7400.11J is publicly available as listed in the ADDRESSES section of this document. These amendments will be published in the next update to FAA Order JO 7400.11.

FAA Order JO 7400.11J lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

This action amends 14 CFR part 71 by amending Jet Routes J-35 and J-101; amending VOR Federal Airways V-9, V-48, V-69, V-227, and V-313; and revoking VOR Federal Airway V-586 due to the planned decommissioning of the Pontiac, IL, VOR. The ATS route actions are described below.

J-35: J-35 extends between the Leeville, LA, VOR/Tactical Air Navigation (VORTAC) and the Northbrook, IL, VOR/DME. The route segment between the Spinner, IL, VORTAC and the Joliet, IL, VOR/DME is removed due to the planned decommissioning of the VOR portion of the Pontiac VOR/DME. Additionally, the route segment between the Farmington, MO, VORTAC and the St. Louis, MO, VORTAC is removed due to that route segment overlapping J-151; the route segment between the St. Louis VORTAC and the Spinner VORTAC is removed due to that route segment overlapping J-101; and the route segment between the Joliet VOR/DME and the Northbrook VOR/DME is removed due to that route segment overlapping J-87. The overlapped J-151, J-101, and J-87 route segments will remain charted and provide navigational guidance between the affected NAVAIDs. As amended, the route is changed to now extend between the Leeville VORTAC and the Farmington VORTAC.

J-101: J-101 extends between the Humble, TX, VORTAC and the Sault Ste Marie, MI, VOR/DME. The route segment between the Spinner, IL, VORTAC and the Joliet, IL, VOR/DME is removed due to the planned decommissioning of the VOR portion of the Pontiac VOR/DME. Additionally, the route segment between the Joliet VOR/DME and the Northbrook, IL, VOR/DME is removed due to that route segment overlapping J-87. As amended, the route is changed to now extend between the Humble VORTAC and the Spinner VORTAC, and between the Northbrook VOR/DME and the Sault Ste Marie VOR/DME.

V-9: V-9 extends between the Leeville, LA, VORTAC and the Pontiac, IL, VOR/DME; and between the Janesville, WI, VOR/DME and the

Houghton, MI, VOR/DME. The airway segment between the Spinner, IL, VORTAC and the Pontiac VOR/DME is removed. As amended, the airway is changed to now extend between the Leeville VORTAC and the Spinner VORTAC, and between the Janesville VOR/DME and the Houghton VOR/DME.

V-48: V-48 extends between the Burlington, IA, VOR/DME and the Pontiac, IL, VOR/DME. The airway segment between the Peoria, IL, VORTAC and the Pontiac VOR/DME is removed. As amended, the airway is changed to now extend between the Burlington VOR/DME and the Peoria VORTAC.

V-69: V-69 extends between the El Dorado, AR, VOR/DME and the Joliet, IL, VOR/DME. The airway segment between the Spinner, IL, VORTAC and the Joliet VOR/DME is removed. As amended, the airway is changed to now extend between the El Dorado VOR/DME and the Spinner VORTAC.

V-227: V-227 extends between the Boiler, IN, VORTAC and the intersection of the Pontiac, IL, 006° and Bradford, IL, 058° radials (PLANO Fix). The airway segment between the Roberts, IL, VOR/DME and the intersection of the Pontiac, IL, 006° and Bradford, IL, 058° radials (PLANO Fix) is removed. As amended, the airway is changed to now extend between the Boiler VORTAC and the Roberts VOR/DME.

V-313: V-313 extends between the Centralia, IL, VORTAC and the Pontiac, IL, VOR/DME. The airway segment between the Adders, IL, VORTAC and the Pontiac VOR/DME is removed. As amended, the airway is changed to now extend between the Centralia VORTAC and the Adders VORTAC.

V-586: V-586 extends between the Peoria, IL, VORTAC and the Joliet, IL, VOR/DME via the Pontiac, IL, VOR/DME. The airway is removed in its entirety.

All NAVAID radials listed in the VOR Federal airway descriptions in the regulatory text of this final rule are unchanged and stated in degrees True north.

Regulatory Notices and Analyses

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore: (1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3)

does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that only affects air traffic procedures and air navigation, it is certified that this rule, when promulgated, does not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

The FAA has determined that this action amending Jet Routes J-35 and J-101; amending VOR Federal Airways V-9, V-48, V-69, V-227, and V-313; and revoking VOR Federal Airway V-586 due to the planned decommissioning of the Pontiac, IL, VOR NAVAID, qualifies for categorical exclusion under the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*) and its implementing regulations at 40 CFR part 1500, and in accordance with FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, paragraph 5-6.5a, which categorically excludes from further environmental impact review rulemaking actions that designate or modify classes of airspace areas, airways, routes, and reporting points (see 14 CFR part 71, Designation of Class A, B, C, D, and E Airspace Areas; Air Traffic Service Routes; and Reporting Points); and paragraph 5-6.5i, which categorically excludes from further environmental impact review the establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima. As such, this action is not expected to result in any potentially significant environmental impacts. In accordance with FAA Order 1050.1F, paragraph 5-2 regarding Extraordinary Circumstances, the FAA has reviewed this action for factors and circumstances in which a normally categorically excluded action may have a significant environmental impact requiring further analysis. The FAA has determined that no extraordinary circumstances exist that warrant preparation of an environmental assessment or environmental impact study.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for 14 CFR part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order JO 7400.11], Airspace Designations and Reporting Points, dated July 31, 2024, and effective September 15, 2024, is amended as follows:

Paragraph 2004 Jet Routes.

* * * * *

J–35 [Amended]

From Leeville, LA; Mc Comb, MS; Sidon, MS; Memphis, TN; to Farmington, MO.

* * * * *

J–101 [Amended]

From Humble, TX; Lufkin, TX; Little Rock, AR; St. Louis, MO; to Spinner, IL. From Northbrook, IL; Badger, WI; Green Bay, WI; to Sault Ste Marie, MI.

* * * * *

Paragraph 6010(a) Domestic VOR Federal Airways.

* * * * *

V–9 [Amended]

From Leeville, LA; Mc Comb, MS; INT Mc Comb 004° and Magnolia, MS, 194° radials; Magnolia; Sidon, MS; Marvell, AR; INT Marvell 326° and Walnut Ridge, AR, 187° radials; Walnut Ridge; Farmington, MO; St. Louis, MO; to Spinner, IL. From Janesville, WI; Madison, WI; Oshkosh, WI; Green Bay, WI; Iron Mountain, MI; to Houghton, MI.

* * * * *

V–48 [Amended]

From Burlington, IA; to Peoria, IL.

* * * * *

V–69 [Amended]

From El Dorado, AR; Pine Bluff, AR; INT Pine Bluff 038° and Walnut Ridge, AR, 187° radials; Walnut Ridge; Farmington, MO; Troy, IL; to Spinner, IL.

* * * * *

V–227 [Amended]

From Boiler, IN; to Roberts, IL.

* * * * *

V–313 [Amended]

From Centralia, IL; to Adders, IL.

* * * * *

V–586 [Removed]

* * * * *

Issued in Washington, DC, on October 2, 2024.

Frank Lias,

Manager, Rules and Regulations Group.

[FR Doc. 2024–23202 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Part 1

[TD 10007]

RIN 1545–BQ39

Syndicated Conservation Easement Transactions as Listed Transactions

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Final regulations.

SUMMARY: This document contains final regulations that identify certain syndicated conservation easement transactions and substantially similar transactions as listed transactions, a type of reportable transaction. Material advisors and certain participants in these listed transactions are required to file disclosures with the IRS and are subject to penalties for failure to disclose. The regulations affect participants in these transactions as well as material advisors.

DATES:

Effective date: These regulations are effective on October 8, 2024.

Applicability date: For applicability dates, see § 1.6011–9(h).

FOR FURTHER INFORMATION CONTACT:

Concerning any provisions in the final regulations within the jurisdiction of the Associate Chief Counsel (Income Tax & Accounting), Joshua S. Klaber, (202) 317–4624, and Eugene Kirman, (202) 317–5149, and concerning any provisions in the final regulations within the jurisdiction of the Associate Chief Counsel (Passthroughs & Special Industries), Charles Wien, (202) 317–5279 (not toll-free numbers).

SUPPLEMENTARY INFORMATION:

Authority

This document amends the Income Tax Regulations (26 CFR part 1) by adding final regulations under section 6011 of the Internal Revenue Code (Code) to identify certain syndicated conservation easement transactions and substantially similar transactions as listed transactions, a type of reportable transaction (final regulations).

Section 6001 of the Code provides an express delegation of authority to the Secretary of the Treasury or her delegate (Secretary), requiring every taxpayer to keep the records, render the statements, make the returns, and comply with the rules and regulations that the Secretary deems necessary to demonstrate tax liability and prescribes, either by notice served or by regulations.

Section 6011 of the Code provides an express delegation of authority to the Secretary, requiring every taxpayer to “make a return or statement according to the forms and regulations prescribed by the Secretary” and “include therein the information required by such forms or regulations.”

In addition, section 6707A(c)(1) of the Code, in defining the term “reportable transaction” relating to the imposition of penalties under section 6707A(a) on “[a]ny person who fails to include on any return or statement any information with respect to a reportable transaction which is required under section 6011 to be included with such return or statement,” provides an express delegation of authority to the Secretary, stating that, “[t]he term ‘reportable transaction’ means any transaction with respect to which information is required to be included with a return or statement because, as determined under regulations prescribed under section 6011, such transaction is of a type which the Secretary determines as having a potential for tax avoidance or evasion.” Section 6707A(c)(2), in defining the term “listed transaction” provides an express delegation of authority to the Secretary, stating that, “[t]he term ‘listed transaction’ means a reportable transaction which is the same as, or substantially similar to, a transaction specifically identified by the Secretary as a tax avoidance transaction for purposes of section 6011.”

The final regulations are also issued under the express delegation of authority under section 7805(a) of the Code.

Background

I. The Proposed Regulations

On December 8, 2022, the Department of the Treasury (Treasury Department) and the IRS published a notice of proposed rulemaking (REG–106134–22) in the **Federal Register** (87 FR 75185) proposing regulations that would identify certain syndicated conservation easement transactions and substantially similar transactions as “listed transactions” for purposes of § 1.6011–4(b)(2) and sections 6111 and 6112 of the Code (proposed regulations). The provisions of the proposed regulations

are explained in greater detail in the preamble to the proposed regulations. The Treasury Department and the IRS received 26 comments in response to the proposed regulations and notice of public hearing that are the subject of this final rulemaking. The comments are available for public inspection at <https://www.regulations.gov> or upon request. A public hearing on the proposed regulations was held by teleconference on March 1, 2023, at 10 a.m. Eastern Time, at which five speakers provided testimony.

After full consideration of the comments received and the testimony provided, these final regulations adopt the proposed regulations with certain revisions described in the Summary of Comments and Explanation of Revisions.

II. Section 605 of the SECURE 2.0 Act

The SECURE 2.0 Act of 2022 (SECURE 2.0 Act), enacted as Division T of the Consolidated Appropriations Act, 2023, Public Law 117–328, 136 Stat. 4459 (December 29, 2022), was enacted just 15 days after publication of the proposed regulations. Section 605(a) of the SECURE 2.0 Act added section 170(h)(7)(A) to the Code, which provides that a contribution by a partnership (whether directly or as a distributive share of a contribution of another partnership) is not treated as a qualified conservation contribution for purposes of section 170 if the amount of such contribution exceeds 2.5 times the sum of each partner's relevant basis in such partnership, as defined in section 170(h)(7)(B). Section 170(h)(7)(F) states that the rules of section 170(h)(7) apply equally to S corporations and other pass-through entities.

Section 605(a) of the SECURE 2.0 Act also added section 170(h)(7)(C) through (E) to the Code, which provide three exceptions to the general disallowance rule in section 170(h)(7)(A). Section 170(h)(7)(C) creates an exception for contributions by a pass-through entity that satisfy a three-year holding period; section 170(h)(7)(D) creates an exception for contributions made by family pass-through entities; and section 170(h)(7)(E) creates an exception for contributions made to preserve a building that is a certified historic structure (as defined in section 170(h)(4)(C)).

Section 605(b) of the SECURE 2.0 Act added section 170(f)(19) to the Code, creating additional reporting requirements for any qualified conservation contribution (1) the conservation purpose of which is the preservation of any building which is a certified historic structure (as defined in

section 170(h)(4)(C)), (2) which is made by a partnership (whether directly or as a distributive share of a contribution of another partnership), and (3) the amount of which exceeds 2.5 times the sum of each partner's relevant basis (as defined in section 170(h)(7)) in the partnership making the contribution. Section 170(f)(19)(C) states that, except as may be otherwise provided by the Secretary, the rules of section 170(f)(19) apply to S corporations and other pass-through entities in the same manner as such rules apply to partnerships.

Section 170(f)(19)(A) provides that no deduction is allowed for such a contribution unless the entity making the contribution (1) includes on its return for the taxable year in which the contribution is made a statement that the entity made such a contribution and (2) provides such information about the contribution as the Secretary may require.

Section 605(c) of the SECURE 2.0 Act provides that no inference is intended as to the appropriate treatment of contributions made in taxable years ending on or before the date of the SECURE 2.0 Act's enactment (December 29, 2022), or as to any contribution for which a deduction is not disallowed by reason of section 170(h)(7).

On November 20, 2023, the Treasury Department and the IRS published a notice of proposed rulemaking (REG–112916–23) in the **Federal Register** (88 FR 80910) proposing regulations concerning the statutory disallowance rule enacted by the SECURE 2.0 Act, including the calculation of relevant basis. On June 28, 2024, the Treasury Department and the IRS finalized these regulations in TD 9999 (89 FR 54284).

Summary of Comments and Explanation of Revisions

This Summary of Comments and Explanation of Revisions summarizes all significant comments addressing the proposed regulations, and describes and responds to comments concerning: (1) the listed transaction system generally; (2) conservation easements generally; (3) the continued necessity of finalizing these regulations following passage of section 605 of the SECURE 2.0 Act; (4) the elements of the listed transaction identified in these final regulations; and (5) the role of donee organizations under these final regulations.

Comments outside the scope of this rulemaking are not adopted.

I. Comments Addressing the General Rules of the Listed Transaction System

Many comments addressed rules that apply generally to any listed transaction. While these comments are

outside the scope of this rulemaking, the Treasury Department and the IRS have nonetheless considered these comments in finalizing these regulations.

A. Requirement To Report for Currently “Open” Periods Upon Identification of a Listed Transaction

Several commenters argued that the proposed regulations' listed transaction designation is impermissibly retroactive because taxpayers who previously filed tax returns (or amended tax returns) reflecting their participation in syndicated conservation easement transactions but that did not disclose their participation pursuant to Notice 2017–10 will be required to disclose those transactions once these final regulations are published in the **Federal Register**. The commenters opined that this so-called retroactive reach of the proposed listed transaction designation is unfair and likely a violation of law under various theories, including that it may be a taking under the Fifth Amendment or constitute involuntary servitude under the Thirteenth Amendment, and that it undermines the purpose of the Administrative Procedure Act's (APA) notice and comment process. Several commenters noted that the Tax Court has not determined whether a listed transaction designation can be applied retroactively; thus, their theory has not been resolved judicially.

The reporting rules for listed transactions are outside the scope of these final regulations, which merely identify a listed transaction. The reporting rules for listed transactions are found in § 1.6011–4, which was issued pursuant to notice and comment and finalized most recently in TD 9350 (72 FR 43146), published in 2007 and which is not amended by these final regulations. Section 1.6011–4(e)(2)(i) requires reporting of transactions entered into prior to the publication of guidance identifying a transaction as a listed transaction if the statute of limitations for assessment of tax is still open when the transaction becomes a listed transaction. While the reporting mandated by § 1.6011–4 may be with respect to prior periods, the disclosure obligation is itself not retroactive—it is a current reporting obligation. Thus, the comments regarding an impermissible retroactive burden required by § 1.6011–4 are without merit.

B. Determining an “Open Year”

Several commenters requested additional guidance on what constitutes an “open year” for purposes of reporting the listed transaction. These commenters opined that the final

regulations should not be able to hold open (or re-open) a statute of limitations for a return that was filed before the relevant transaction became a listed transaction. One commenter stated that such a rule would result in taxpayers currently under audit and disputing penalties based on an expired statute of limitations finding one legal basis of their case evaporated, undoing months or years of analysis and evaluation.

Guidance on open years for purposes of applying § 1.6011-4 is outside the scope of these final regulations, which merely identify a listed transaction. However, if a taxpayer who is required to disclose a listed transaction for a taxable year for which the statute of limitations has not expired prior to the identification of the listed transaction fails to do so, then the taxpayer's statute of limitations will continue to stay open for that taxable year as provided in section 6501(c)(10) of the Code. Section 6501(c)(10) provides that, if a taxpayer fails to include on any return or statement for any taxable year any information with respect to a listed transaction (as defined in section 6707A(c)(2) of the Code) which is required under section 6011 to be included with such return or statement, the time for assessment of any tax imposed by the Code with respect to such transaction does not expire before the date that is one year after the earlier of (1) the date the taxpayer provides the required information or (2) the date that a material advisor meets the requirements of section 6112 with respect to a request by the Secretary under section 6112(b) relating to such transaction with respect to such taxpayer. Section 301.6501(c)-1(g)(3)(iii) of the Procedure and Administration Regulations (26 CFR part 301), which was issued pursuant to notice and comment and finalized most recently in TD 9718 (80 FR 16973), published in 2015, and which is not amended by these final regulations, provides (1) that the taxable years to which the failure to disclose relates include each taxable year that the taxpayer participated (as defined under section 6011 and the regulations thereunder) in a transaction that was identified as a listed transaction and for which the taxpayer failed to disclose the listed transaction as required under section 6011, and (2) if the taxable year in which the taxpayer participated in the listed transaction is different from the taxable year in which the taxpayer is required to disclose the listed transaction under section 6011, the taxable years to which the failure to disclose relates include each taxable

year for which the taxpayer participated in the transaction.

Several commenters asked for guidance as to what constitutes an "open" tax year for taxpayers that took the position they were not required to file a Form 8886, *Reportable Transaction Disclosure Statement*, because Notice 2017-10 was invalidated. This requested guidance is also outside the scope of these final regulations for the reasons discussed in the prior paragraph.

C. Abating Section 6707A Penalties

One commenter expressed concern that there are no adequate procedures or policies for abating section 6707A penalties with respect to listed transactions. This comment is outside the scope of these final regulations as the regulations merely identify a listed transaction. The rules concerning section 6707A penalties are found in § 301.6707A-1, which was issued pursuant to notice and comment and finalized most recently in TD 9853 (84 FR 11217), published in 2019 and which is not amended by these final regulations.

D. Material Advisors

The proposed regulations provided no special rules for material advisors. However, the effect of identifying a listed transaction is, in part, to require certain disclosures from material advisors.

One commenter asked that the final regulations provide guidance to appraisers on the application of any material advisor requirements, and suggested that, if an appraiser is engaged after an easement is put in place, the appraiser should not be considered a material advisor.

The requested guidance is outside the scope of these final regulations; however, the Treasury Department and the IRS note that the definition of material advisor is found in § 301.6111-3(b), which was issued pursuant to notice and comment and finalized in TD 9351 (72 FR 43157), published in 2007 and which is not amended by these final regulations. A material advisor is a person who makes a "tax statement," as defined in § 301.6111-3(b)(2)(ii), and derives gross income in excess of the "threshold amount," as defined in § 301.6111-3(b)(3) (generally, \$10,000 for listed transactions). Section 301.6111-3 contains no exception for providing advice "after" the transaction is entered into. Section 301.6111-3(b)(4)(i) provides that a person will be treated as becoming a material advisor when all of the following events have occurred (in no particular order): (1) the

person provides material aid, assistance, or advice as described in § 301.6111-3(b)(2); (2) the person directly or indirectly derives gross income in excess of the threshold amount as described in § 301.6111-3(b)(3); and (3) the transaction is entered into by the taxpayer to whom or for whose benefit the person provided the tax statement, or in the case of a tax statement provided to another material advisor, when the transaction is entered into by a taxpayer to whom or for whose benefit that material advisor provided a tax statement. Thus, an appraiser that is engaged after an easement is put in place can be a material advisor based on statements or actions after an easement is put in place.

A few commenters argued that the "retroactivity component" to material advisors (due to required disclosures) is impermissible or burdensome. This comment is without merit and outside the scope of these final regulations; however, the Treasury Department and the IRS note that § 301.6111-3(b)(4)(iii) provides that, if a transaction that was not a reportable transaction is identified as a listed transaction in published guidance after the occurrence of the events described in § 301.6111-3(b)(4)(i), the person will be treated as becoming a material advisor on the date the transaction is identified as a listed transaction. As the resulting obligations imposed are limited to actions the person must take thereafter, the requirement is not retroactive.

II. Comments Concerning Conservation Easements Generally

Several commenters addressed aspects of conservation easements that are outside the scope of these final regulations but have nonetheless been considered in adopting these final regulations. This part II of this Summary of Comments and Explanation of Revisions describes and responds to comments relating to: (1) the consistency of these final regulations with the congressional intent to conserve land; (2) overvaluation abuse in abusive syndicated conservation easement transactions; (3) whether disclosure of the listed transactions is needed since taxpayers must file Form 8283, *Noncash Charitable Contributions*; and (4) requests for enforcement data on syndicated conservation easement transactions.

A. Supporting Conservation While Combatting Abuse

One commenter noted that abusive syndicated conservation easement transactions are antithetical to the concept of charity that section 170(h)

was designed to enable. The Treasury Department and the IRS agree.

However, several commenters opined that identification of syndicated conservation easement transactions as listed transactions is inconsistent with congressional intent to promote conservation. These commenters argued that the proposed regulations disincentivize conservation by increasing the audit risk of taxpayers involved in syndicated conservation easement transactions and that the uncertainty relating to what is considered a “substantially similar” transaction has a chilling effect. These commenters further argued that the proposed regulations go beyond the scope of section 170(h)(7), violate the separation of powers, and are contrary to the priorities of the Administration.

The Treasury Department and the IRS do not agree with the comments criticizing the identification of syndicated conservation easement transactions as listed transactions. Contrary to the commenters’ assertions, Congress has made it clear that it is concerned with abusive syndicated conservation easement transactions. *See, e.g., Syndicated Conservation-Easement Transactions*, S. Prt. 116–44 (August 2020). The minimal impact on taxpayers who claim legitimate charitable contribution deductions for qualified conservation contributions and who may decide to file a protective disclosure is far outweighed by the benefit of requiring disclosure for the identified transactions. In addition, combatting abusive tax shelters is a priority for the Federal government.

B. Valuation Abuse

Several commenters noted that the central problem with abusive syndicated conservation easements is inaccurate, inflated, and flawed appraisals and the associated overvaluation of conservation easements. A few commenters asked that these final regulations be replaced with “meaningful guidance” on valuation or appraisal methodology, including modifications to the rules for qualified appraisals under § 1.170A–17 and guidance on how to determine the highest and best use of properties for purposes of easement valuation. One commenter suggested that the IRS litigate fraudulent appraisal practices as an alternative to “questioning the long-standing conservation practices of donee organizations.” One commenter suggested establishing an enhanced appraisal process similar to the process the IRS has established for the art community.

Any guidance on valuation is outside the scope of these final regulations, which are limited to identifying a listed transaction. The purpose of these final regulations is to require taxpayers and material advisors to report transactions for which the claimed value of a syndicated conservation easement contribution strongly indicates overvaluation and thus tax avoidance. The Treasury Department and the IRS have challenged and will continue to challenge abusive appraisal practices and overvaluation.

C. Disclosures

Some commenters questioned why the IRS needs to identify certain syndicated conservation easements as a listed transaction when contributions of conservation easements are already disclosed on the Form 8283, which contains, among other information, the easement’s appraised value, when and how the property was acquired, the donor’s cost or adjusted basis, the amount deducted, and the date of the contribution. The commenters noted that the Form 8283 must be prepared completely and accurately because a deduction will be disallowed if any information is missing.

The Form 8283, which is filed as a part of a taxpayer’s tax return, does not include all the information contained on Form 8886. It also does not alert the Office of Tax Shelter Analysis to the taxpayer’s participation in an abusive transaction, nor does it trigger disclosure and other obligations of material advisors to the transaction. Accordingly, these comments are not adopted.

D. Requests for Enforcement Data

Some commenters, citing to an issue in the remand of *CIC Services, LLC v. IRS*, 592 F. Supp. 3d 677 (E.D. Tenn. 2022), asserted that the proposed regulations are arbitrary and capricious because, in their opinion, the APA requires numerical data on syndicated conservation easement transactions as part of the rationale for identifying a listed transaction. The commenters requested the number of past syndicated conservation easement transactions, the number of syndicated conservation easement transactions challenged, the status and/or outcome of every current syndicated conservation easement challenge, the number of syndicated conservation easement transactions deemed abusive by courts, the dollar amounts involved in syndicated conservation easement transactions, the number of taxpayers affected by syndicated conservation easement transactions, the nature and amount of

the contributions involved, the value and acreage of the property conserved by syndicated conservation easement transactions, and the effect of syndicated conservation easement transactions on nature and wildlife.

CIC Services and other authorities do not require the public release of enforcement data, or the other analysis commenters requested, as a part of rulemaking. Section 6011 and the regulations thereunder require that the IRS (1) determine that a transaction is a tax avoidance transaction and (2) identify the transaction as a listed transaction by notice, regulation, or other form of published guidance. The Treasury Department and the IRS have consistently maintained, since the issuance of Notice 2017–10, that certain syndicated conservation easement transactions are tax avoidance transactions and have identified them as such by notice or regulation. An offer to potentially be allocated a charitable contribution deduction that is at least 2.5 times one’s investment, likely resulting in a positive after-tax financial benefit from what is supposed to be a charitable contribution, is strongly indicative of a tax avoidance transaction and has been identified by Congress as such. *See, e.g.,* section 170(h)(7). Further, the data requested by commenters is unrelated to whether the identified transactions are tax avoidance transactions.

III. Comments Regarding the Necessity of These Final Regulations in Light of Section 605 of the SECURE 2.0 Act

Several commenters questioned the need for the proposed regulations to be adopted as final regulations, given the enactment in December of 2022 of section 605 of the SECURE 2.0 Act, which added section 170(h)(7) to the Code to disallow a deduction for “the vast majority” of the abusive syndicated conservation easement transactions identified in the proposed regulations. Commenters asked that, in light of the legislation, the proposed regulations either be withdrawn or be revised to take a “more surgical approach” that is in accordance with the new statute (and addresses other concerns).

Some of these commenters opined that the proposed regulations were overbroad and inconsistent with congressional intent, in part because the proposed regulations did not include the three exceptions to section 170(h)(7)(A) that Congress included in section 170(h)(7)(C) through (E). These commenters argued that syndicated conservation easement transactions that meet an exception to section 170(h)(7)(A) should also be excepted

from the definition of the listed transaction identified in the proposed regulations.

Other commenters supported adopting final regulations to help the IRS identify promoters, material advisors, and donee organizations involved in abusive syndicated conservation easement transactions. The commenters noted that section 605 of the SECURE 2.0 Act is prospective only. These commenters, however, suggested a few modifications to the proposed rules, which are discussed later in this part III and in part IV of this Summary of Comments and Explanation of Revisions.

The Treasury Department and the IRS have concluded that it is in the interest of sound tax administration to continue to identify abusive syndicated conservation easement transactions as listed transactions, notwithstanding passage of section 605 of the SECURE 2.0 Act. However, in adopting the proposed regulations as final regulations, the Treasury Department and the IRS have made several modifications to the proposed rules, as described in this Summary of Comments and Explanation of Revisions. Thus, these final regulations are consistent with the commenters' recommendation that the final regulations take "a more surgical approach" to the definition of the syndicated conservation easement listed transaction following the enactment of section 170(h)(7).

Specifically, these final regulations cover three major classes of abusive syndicated conservation easement transactions (and substantially similar transactions): (1) those that involve contributions occurring before December 30, 2022; (2) those for which a charitable contribution deduction is not automatically disallowed by section 170(h)(7); and (3) those that substitute the contribution of a fee simple interest in real property for the contribution of a conservation easement.

A. Transactions Occurring Before December 30, 2022

Section 170(h)(7)(A) does not apply to contributions made on or before December 29, 2022. As a result, these final regulations are necessary to obtain reporting of transactions that are the same as, or substantially similar to, syndicated conservation easement transactions in cases in which the conservation easements were contributed before December 30, 2022, and the taxpayers did not disclose the transaction pursuant to Notice 2017–10. Thus, these final regulations impose reporting requirements on taxpayers

who had not previously disclosed their participation in transactions that are the same as, or substantially similar to, syndicated conservation easement transactions to the extent that a taxpayer's participation in the transaction occurred in one or more taxable years as to which the statute of limitations had not run as of the date these final regulations identify the transaction as a listed transaction.

Some commenters contended that, since many taxpayers have already reported their transactions under Notice 2017–10, the IRS already has the information reporting targeted by the proposed regulations. The Treasury Department and the IRS agree that, in such cases, duplicative reporting under these final regulations is unnecessary. Accordingly, these final regulations explicitly provide that taxpayers who fully disclosed their participation in syndicated conservation easement transactions pursuant to Notice 2017–10 do not need to disclose again under these final regulations for any taxable years covered by the prior disclosure.

B. Transactions Not Automatically Disallowed by Section 170(h)(7)

The final regulations do not include an exception for transactions that are excluded from the automatic disallowance rule in section 170(h)(7). Of note, the SECURE 2.0 Act, which was enacted after the proposed regulations were issued, does not provide that the exceptions to section 170(h)(7)(A) through (E) are also exceptions for purposes of the listed transaction rules. To the contrary, section 605(c)(2) of the SECURE 2.0 Act explicitly states: "No inference is intended as to the appropriate treatment of . . . any contribution for which a deduction is not disallowed by reason of section 170(h)(7) of the Internal Revenue Code of 1986, as added by this section." Thus, Congress has indicated that the fact that such transactions are not automatically disallowed does not mean that such transactions could not be abusive.

There are at least two types of conservation easement transactions for which a charitable contribution deduction is not automatically disallowed by section 170(h)(7) that are appropriately considered listed transactions. First, transactions satisfying any of the three exceptions found in section 170(h)(7)(C) through (E) that also contain all the elements of a transaction identified as a listed transaction under these final regulations continue to be transactions that the Treasury Department and the IRS view as likely to be abusive. Thus, the final

regulations do not include any exceptions for transactions described in section 170(h)(7)(C) through (E).

Second, any syndicated conservation easement transaction for which a charitable contribution deduction is not automatically disallowed by section 170(h)(7) because the amount of the partnership's contribution does not exceed 2.5 times the sum of each partner's relevant basis in the partnership is nevertheless a listed transaction with respect to any partner who received promotional materials offering the possibility of being allocated a share of the contribution that equals or exceeds 2.5 times that partner's investment.

C. Transactions That Involve Other Contributions of Real Property

The preamble to the proposed regulations stated that transactions in which the contributed property is described in section 170(h)(2)(A) or (B), or is a fee interest in real property, are transactions substantially similar to the listed transaction identified in proposed § 1.6011–9(b). Several commenters noted that this language appears to imply that any transaction that meets the elements of the listed transaction identified in the proposed regulations, but that consists of the contribution of real property, is substantially similar to the listed transaction identified in the proposed regulations.

One commenter supported the inclusion of fee simple contributions in the preamble to the proposed regulations and asked that fee simple transactions be expressly identified in the regulatory text of the final regulations. Another commenter asked that the final regulations "clarify" whether fee simple contributions are considered substantially similar to syndicated conservation easement transactions, stating that "the preamble language is not law." However, several other commenters questioned why contributions of fee simple interests in property would be considered transactions that are substantially similar to the syndicated conservation easement transaction identified in the proposed regulations. One commenter contended that the tax consequences, specifically taxpayer contribution base limitations and carryover periods, are different for fee simple contributions and conservation easement contributions.

The Treasury Department and IRS continue to believe that a transaction that meets the elements of the listed transaction identified in these final regulations, but consists of the contribution of a fee simple interest

rather than of a conservation easement, is substantially similar to the listed transaction identified in these final regulations. The commenters questioning the treatment of contributions of fee simple interests as substantially similar transactions failed to address the broad definition of substantially similar found in § 1.6011-4(c)(4), which was issued after notice and comment; that Congress specifically adopted the term “substantially similar” in its subsequent enactment of section 6707A(c)(2); and that Congress specifically referenced the definition in § 1.6011-4(c)(4) when explaining that provision. See Footnote 232 of House Report 108-548(I), 108th Cong., 2nd Sess. 2004, at 261 (June 16, 2004) (House Report) (emphasis added):

The provision states that, except as provided in regulations, a listed transaction means a reportable transaction, which is the same as, or substantially similar to, a transaction specifically identified by the Secretary as a tax avoidance transaction for purposes of section 6011. *For this purpose, it is expected that the definition of “substantially similar” will be the definition used in Treas. Reg. sec. 1.6011-4(c)(4).* However, the Secretary may modify this definition (as well as the definitions of “listed transaction” and “reportable transactions”) as appropriate.

In particular, despite the differing taxpayer contribution base limitations and carryover periods between a fee simple donation and a conservation easement donation, the transactions can result in similar types of tax consequences and be either factually similar or based on the same or a similar tax strategy.

In sum, the Treasury Department and the IRS agree that any contribution of real property (including contributions of fee simple interests and contributions described in section 170(h)(2)(A) or (B)) that meets the elements of the listed transaction identified in the proposed regulations is a transaction that is substantially similar to the listed transaction identified in the proposed regulations. Accordingly, § 1.6011-9(c)(7) of these final regulations explicitly states that a transaction that meets all the elements described in § 1.6011-9(b), except that the transaction involves the contribution of a fee simple interest or the contribution of a real property interest described in section 170(h)(2)(A) or (B) instead of a conservation easement, is substantially similar (within the meaning of § 1.6011-4(c)(4)) to the transaction described in § 1.6011-9(b). The final regulations contain an example showing a transaction involving the contribution of a fee simple interest that is substantially

similar to the transaction described in § 1.6011-9(b).

D. Other Substantially Similar Transactions

Multiple commenters raised general concerns about the potential scope of transactions that are “substantially similar” to the listed transaction identified in the proposed regulations. Several of those commenters opined that the substantially similar rule is void for vagueness or overbroad, and some commenters requested that the term be made more specific. Several commenters asked whether the 2.5 times rule in proposed § 1.6011-9(b)(1) is a bright-line rule; in other words, whether transactions for which the highest estimate of charitable contribution deduction in the promotional materials is less than 2.5 times a taxpayer’s investment could be substantially similar to the listed transaction identified in these regulations.

As previously discussed, the term “substantially similar” is part of the statutory definition of a listed transaction in section 6707A(c)(2); furthermore, the regulatory definition found in § 1.6011-4(c)(4) was adopted after notice and comment and has been viewed favorably by Congress. Under § 1.6011-4(c)(4), whether a transaction is “substantially similar” to a syndicated conservation easement transaction depends on the tax consequences, the tax strategy, and other facts and circumstances related to the transaction. Section 1.6011-4(c)(4) further provides that the term substantially similar must be broadly construed in favor of disclosure.

The “substantially similar” rule provides an important backstop against advisors’ and promoters’ attempts to avoid the reporting requirements. Consistent with that objective, these final regulations generally do not circumscribe the types of transactions that may be substantially similar to the listed transaction identified in these final regulations. Nonetheless, as discussed in part IV.A.3. of this Summary of Comments and Explanation of Revisions, these final regulations do provide that the 2.5 times rule is a bright-line rule. Thus, transactions in which the promotional materials offer investors the possibility of being allocated a charitable contribution deduction of anything less than 2.5 times a taxpayer’s investment generally are not substantially similar to the listed transaction identified in these final regulations. However, if the taxpayer is nonetheless allocated a charitable contribution deduction that equals or

exceeds 2.5 times the taxpayer’s investment, the rebuttable presumption in § 1.6011-9(d)(3) would apply.

Several commenters asked whether transactions that involve contributions other than real property, such as those that involve contributions of artwork or other non-cash items, are listed transactions. The Treasury Department and the IRS have determined that such transactions are not “substantially similar” for purposes of these final regulations because this listed transaction relates to contributions of real property, not of personal property. The Treasury Department and the IRS will continue to evaluate whether the transactions raised by commenters are tax avoidance transactions and may propose to identify such transactions as listed transactions in future guidance.

A few commenters asked whether transactions that do not involve a contribution by a pass-through entity (such as a transaction involving a contribution by an individual or a corporation) are “substantially similar” transactions. The Treasury Department and the IRS have determined that transactions that do not involve a contribution by a pass-through entity are not considered substantially similar transactions; however, these transactions likewise could be proposed to be identified as tax avoidance transactions in future guidance.

One commenter asked whether transactions that involve deductions other than under section 170 (that is, transactions involving the “use of different Code provisions”), are considered “substantially similar” to the syndicated conservation easement transaction identified in the proposed regulations. It is possible that a pass-through entity could use a deduction other than allowed under section 170 to obtain the same or a similar type of tax consequences, and that such transaction would either be factually similar or based on the same or similar tax strategy to the listed transaction identified in these final regulations. Therefore, the Treasury Department and IRS conclude it is possible that a transaction that abuses the application of a section of the Code other than section 170, for example, section 642(c), could be a substantially similar transaction. Under § 1.6011-4(f)(1), taxpayers who are uncertain whether a particular transaction is substantially similar to a syndicated conservation easement transaction may request a private letter ruling from the IRS.

Several commenters expressed concern that, given the uncertainty about whether a particular transaction would be substantially similar to a

listed transaction, the regulations could have a chilling effect on the willingness of qualified organizations to accept contributions of conservation easements if the section 4965 carveout were eliminated in the final regulations. As described in part V of this Summary of Comments and Explanation of Revisions, these final regulations maintain the section 4965 carveout for qualified organizations, which addresses those concerns.

IV. Comments Regarding Elements of the Listed Transaction Identified in the Proposed Regulations

Several comments focused on the elements of the listed transaction identified in the proposed regulations. This part IV describes and responds to these comments, specifically comments regarding (1) the 2.5 times rule; (2) application of the 2.5 times rule; (3) timing rules; and (4) definitions.

A. The 2.5 Times Rule

Commenters addressed the rationale for the 2.5 times multiple, interaction with the 2.5 times rule in section 170(h)(7), and whether 2.5 times is a bright line.

1. Rationale for the 2.5 Times Multiple

Several commenters questioned the rationale for the 2.5 times multiple in the proposed regulations. Some commenters argued that, depending on the top marginal tax rate, a 2.5 times multiple would result in minimal, if any, tax benefit to the investor. One commenter opined that, because there is no explanation for how the multiple was determined, there is no way to determine whether this criterion is reasonable.

The Treasury Department and the IRS have concluded, consistent with Notice 2017–10, that once a transaction offers the possibility of a charitable contribution deduction that equals or exceeds an amount that is 2.5 times the amount of the taxpayer's investment, the transaction is a tax avoidance transaction that justifies a reporting obligation. At this 2.5 times threshold, a taxpayer in the highest current marginal tax bracket claiming a charitable contribution deduction for a qualified conservation contribution will approximately break even before considering State tax benefits, and, for any amounts above 2.5 times, will have an economic gain directly from making the charitable contribution deduction. This multiple is also aligned with the 2.5 times threshold established by Congress in section 605 of the SECURE 2.0 Act, which disallows certain deductions at the partnership level for

contributions exceeding 2.5 times the sum of each partner's relevant basis. Thus, the Treasury Department and the IRS conclude that it is reasonable and in the sound interest of tax administration to adopt the 2.5 times threshold as proposed.

2. Interaction With the 2.5 Times Rule in Section 170(h)(7)

Several commenters addressed the interaction of the 2.5 times rule with section 170(h)(7) and asked whether only transactions in which the charitable contribution deduction promised in the promotional materials is exactly 2.5 times the investment need to be disclosed (because transactions in which the deduction amount exceeds 2.5 times the investment are generally disallowed by section 170(h)(7)). Under these final regulations, both transactions in which the charitable contribution deduction promised in the promotional materials is exactly 2.5 times the investment and transactions in which the charitable contribution deduction promised in the promotional materials exceeds 2.5 times the investment must be disclosed.

As discussed in part III of this Summary of Comments and Explanation of Revisions, certain transactions for which a deduction is not disallowed by section 170(h)(7) are nevertheless considered listed transactions.

3. Whether 2.5 Times Is a Bright Line

As noted in part III.D. of this Summary of Comments and Explanation of Revisions, several commenters asked whether 2.5 times is a bright line; in other words, whether transactions for which the highest estimate of charitable contribution deduction in the promotional materials is less than 2.5 times a taxpayer's investment could be considered substantially similar transactions. One of these commenters encouraged the IRS to clarify that the 2.5 times rule is not intended to create or imply a safe harbor for excessive valuations below the 2.5 times threshold and that the 2.5 times rule does not implicitly approve charitable contribution deduction amounts less than 2.5 times a taxpayer's investment. This commenter noted that, regardless of whether a contribution is a listed transaction pursuant to § 1.6011–4(b)(2), it remains subject to all the relevant requirements of law, including those regarding valuation and substantiation of that valuation by means of a qualified appraisal by a qualified appraiser pursuant to § 1.170A–17 that is subject to review by the IRS for its accuracy. A few commenters asked the IRS to pick an actual number (for example, 2.0,

2.25, 2.45, or 2.49 times) at which a transaction will incur greater IRS scrutiny.

The Treasury Department and the IRS agree that taxpayers need some certainty on which transactions need to be disclosed to the IRS. The Treasury Department and the IRS have determined that a transaction in which the promotional materials offer the taxpayer the possibility of being allocated a charitable contribution deduction of only an amount less than 2.5 times the taxpayer's investment and for which the taxpayer is actually allocated a charitable contribution deduction of an amount less than 2.5 times the taxpayer's investment (so that the rebuttable presumption in § 1.6011–9(d)(3) does not apply) generally is not “substantially similar” to the listed transaction identified in these final regulations. This determination takes into account both the need for taxpayer certainty on reporting obligations and the possibility of being allocated a charitable contribution deduction the amount of which is less than 2.5 times the amount of the taxpayer's investment presents less risk of the type of net-positive financial benefit to investors that exists at and above the 2.5 times threshold. This bright-line rule does not imply that valuations giving rise to an amount less than 2.5 times a taxpayer's investment are properly valued. The Treasury Department and the IRS agree with the commenter that, regardless of whether a contribution is a reportable transaction pursuant to § 1.6011–4, it remains subject to all the relevant requirements of law. For example, a claimed charitable contribution deduction amount that is 2.0 times the partner's investment may still be overvalued or unsubstantiated, and the valuation remains subject to review by the IRS for accuracy.

In view of the foregoing, these final regulations add new § 1.6011–9(d)(1) to state that the 2.5 times threshold is a bright line. However, this new rule also provides that, if a pass-through entity engages in a series of transactions (for example, contribution of an easement followed by contribution of a fee simple interest) with a principal purpose of avoiding the application of this bright-line rule, the series of transactions may be disregarded, or the arrangement may be recharacterized in accordance with its substance. Whether a series of transactions has a principal purpose of avoiding the application of this bright-line rule is determined based on all the facts and circumstances.

B. Application of the 2.5 Times Rule

The proposed regulations contained three rules to address potential avoidance of the 2.5 times rule. Taxpayers commented on each of these rules.

1. Multiple Suggested Deduction Amounts

The proposed regulations contained a rule that, if the promotional materials suggest or imply a range of possible charitable contribution deduction amounts that may be allocated to the taxpayer, the highest suggested or implied deduction amount will determine whether the 2.5 times rule is met. In addition, if one piece of promotional materials (for example, an appraisal or oral statement) suggests or implies a higher charitable contribution deduction amount than suggested or implied by other promotional materials, then the highest suggested charitable contribution deduction amount determines whether the 2.5 times rule is met. As the preamble to the proposed regulations explained, this rule is intended to prevent promoters from circumventing the 2.5 times rule by having promotional materials contain language that is inconsistent as to the amount of the potential charitable contribution deduction.

One commenter stated that the proposed rule “does not apply to ambiguities in the taxpayer’s materials, it allows the Treasury to create ambiguities in the taxpayer’s materials.” However, another commenter asked whether a transaction that meets the elements of the listed transaction identified in the proposed regulations, except that the partnership merely promises that the investment will “grow by” 2.5 times without mentioning a charitable contribution deduction, is considered a “substantially similar” transaction. The intent of the rule is to prevent promoters from circumventing the 2.5 times rule by creating ambiguous promotional materials, and the transaction described in the preceding sentence would be a substantially similar transaction. Thus, these final regulations adopt the rule as proposed.

2. Rebuttable Presumption

The proposed regulations included a rebuttable presumption deeming the 2.5 times rule to be met if (1) the pass-through entity donates a conservation easement within three years following a taxpayer’s investment in the pass-through entity, (2) the pass-through entity allocates a charitable contribution deduction to the taxpayer the amount of which equals or exceeds two and one-

half times the amount of the taxpayer’s investment, and (3) the taxpayer claims a deduction the amount of which equals or exceeds two and one-half times the amount of the taxpayer’s investment. The proposed regulations provided that this presumption may be rebutted if the taxpayer establishes to the satisfaction of the Commissioner that none of the promotional materials contained a suggestion or implication that investors might be allocated a charitable contribution deduction the amount of which equals or exceeds an amount that is two and one-half times the amount of their investment in the pass-through entity.

Several commenters objected to the rebuttable presumption rule, stating that it is “arbitrary and capricious;” that taxpayers cannot prove a negative (particularly with respect to oral representations); that any attempt to prove in court that oral representations were not made is hearsay; that the regulations do not speak to how a taxpayer is able to rebut the presumption; that it seems to be attempting to switch the penalty burden from the IRS to taxpayers; and that the IRS has demonstrated to taxpayers that it will neither be fair nor listen to reasonable evidence in syndicated conservation easement tax disputes. Commenters asked for guidance on how taxpayers may be able to rebut the rebuttable presumption.

The Treasury Department and the IRS conclude that the rebuttable presumption is reasonable because it is unlikely that a taxpayer would claim a deduction for 250 percent of their investment in a pass-through entity within three years of making that investment and not have received promotional materials offering the possibility to do so. This presumption is needed to address transactions with respect to which taxpayers and promoters are not forthcoming about the content or receipt of the promotional materials. While the Treasury Department and the IRS decline to provide a specific method to rebut the presumption in these final regulations because such rebuttal would necessarily be dependent on the taxpayer’s specific facts and circumstances, the Treasury Department and the IRS expect that, in appropriate cases, taxpayers will be able to establish to the satisfaction of the Commissioner that none of the promotional materials contained a suggestion or implication that investors might be allocated a charitable contribution deduction the amount of which equals or exceeds an amount that is two and one-half times the amount of their investment in the pass-through

entity. For example, a taxpayer may be able to rebut the presumption by establishing that the partnership was not open to other investors (and thus the only promotional materials were documents needed to execute the transaction) or that similar properties in the same area had increased significantly in value in the period between the time the taxpayer invested in the partnership and the date the conservation easement was contributed.

Contrary to commenters’ assertions, nothing in the proposed regulations suggested that the Commissioner will disregard evidence rebutting the presumption. Section 7803(a)(3)(D) and (J) of the Code require the Commissioner to ensure that employees of the IRS are familiar, and act in accordance, with taxpayer rights, including the right to challenge the position of the IRS, the right to be heard, and the right to a fair and just tax system. Furthermore, the phrase “to the satisfaction of the Commissioner” does not preclude future judicial review, and the Commissioner bears the burden of demonstrating that each of the other elements of the listed transaction has been fulfilled and may have the burden of production under section 7491(c) of the Code in a court proceeding regarding the imposition of a penalty, depending on the party against whom it is asserted. In the view of the Treasury Department and the IRS, evidence regarding oral promotional materials generally would not constitute inadmissible hearsay because the oral promotional materials would not be offered for the truth of the matters asserted therein, but rather as evidence of what was stated. *See Fed. R. Evid.* 801(c)(2).

Some commenters asked whether the rebuttable presumption implies that taxpayers do not need to report if (1) at least three years have passed between the taxpayer’s investment in the pass-through entity and the pass-through’s contribution of a conservation easement or (2) if the deduction amount is less than 2.5 times the amount of an investor’s investment. The rebuttable presumption does not carry either of these implications.

The Treasury Department and the IRS have decided to retain the rebuttable presumption in the final regulations because the administrative need for a rebuttable presumption outweighs the concerns raised by the commenters. Taxpayers and promoters are the persons with access to and knowledge of the promotional materials involved in their transactions. Taxpayers should not be able to escape the requirements of these final regulations because their

syndicators were effective in masking their promises. Accordingly, the final regulations retain the rebuttable presumption rule.

3. Determining the Amount of a Taxpayer's Investment in the Pass-Through Entity

The proposed regulations contained an anti-stuffing rule providing that, for purposes of determining whether a transaction is a listed transaction, the amount of a taxpayer's investment in the pass-through entity is limited to the portion of the taxpayer's investment that is attributable to the portion of the real property on which a conservation easement is placed and that produces the charitable contribution deduction.

A few commenters noted that the term "investment" in proposed § 1.6011-9(b)(1) is not defined, while one commenter stated that the anti-stuffing rule found in proposed § 1.6011-9(d)(3) provides the taxpayer's investment for purposes of the 2.5 times rule. Several commenters stated that the anti-stuffing rule in the proposed regulations is inconsistent with the relevant basis rule in section 170(h)(7)(B), and others suggested that the anti-stuffing rule in the proposed regulations should be replaced with the relevant basis rule in section 170(h)(7)(B).

The Treasury Department and the IRS note that the term "investment" is not generally defined within the Code. However, the Treasury Department and the IRS agree with the commenter stating that the anti-stuffing rule found in proposed § 1.6011-9(d)(3) provides the taxpayer's investment for purposes of the 2.5 times rule. Further, in response to comments that relevant basis should also be permitted to be used to determine investment, these final regulations provide that a taxpayer may determine the amount of their investment in the pass-through entity using one of the methods provided in § 1.6011-9(d)(4), which identifies the anti-stuffing method and, for contributions occurring on or after December 30, 2022, adds the relevant basis method in section 170(h)(7)(B) as another method to determine the amount of the taxpayer's investment in the pass-through entity. No other methods may be used.

In response to commenters asserting that relevant basis should replace the anti-stuffing rule, the relevant basis computations under section 170(h)(7) do not apply to all transactions for which disclosure is required under these final regulations (such as to contributions before the effective date of section 170(h)(7) in taxable years for which the statute of limitations is still

open); thus, these final regulations retain the anti-stuffing method as one method to determine investment for purposes of the 2.5 times rule.

i. Anti-Stuffing Method

As mentioned before in part IV.B.3 of this Summary of Comments and Explanation of Revisions, several commenters addressed the anti-stuffing rule found in the proposed regulations, which these final regulations rename the "anti-stuffing method" to determine investment for purposes of the 2.5 times rule. For example, one commenter requested clarification on how to determine the portion of the investment that is "attributable" to the real property on which the conservation easement is placed. Another commenter stated that the proposed anti-stuffing rule may give rise to constitutional challenges because it requires the separation of investment assets, creating more cost for investment managers and for investors, which they contended is a limitation on interstate commerce, a power reserved only for the legislative branch. One commenter opined that the anti-stuffing rule will be impossible to apply in practice; the commenter noted that the example of the anti-stuffing rule in the proposed regulations involved marketable securities with an identifiable fair market value and questioned how to apply the anti-stuffing rule if the pass-through entity holds multiple pieces of property. Another commenter stated that the example in the proposed regulations illustrating the anti-stuffing rule was merely an example of the basis allocation rules under section 755 of the Code and that allocation rules under section 755 do not require additional explanation.

The Treasury Department and the IRS conclude that the anti-stuffing rule provides a reasonable method to determine the taxpayer's investment in the pass-through entity by looking only to amounts attributable to the property generating the charitable contribution deduction. In response to comments requesting additional guidance on the determination of the amount of a taxpayer's investment, these final regulations provide that, under the anti-stuffing method, if an investor uses non-cash assets to acquire its interest in the pass-through entity, then the fair market value of such assets, rather than their basis, is the relevant measure. In particular, under § 1.6011-9(d)(4)(ii) of these final regulations, the amount of a taxpayer's investment in the pass-through entity is the portion of the cash and fair market value of the assets the taxpayer uses to acquire its interest in the pass-through entity that is

attributable to the real property on which a conservation easement is placed (or the portion thereof, if an easement is placed on a portion of the real property) and that produces the charitable contribution deduction described in § 1.6011-9(b)(3).

The Treasury Department and the IRS disagree that the anti-stuffing rule is impossible to apply in practice. Syndicated conservation easement transactions often involve scenarios similar to the example provided in the proposed regulations, in which the pass-through entity owns only cash and marketable securities in addition to its real property. Moreover, these regulations apply to transactions in which the promotional materials offer the possibility of charitable contribution deductions, and thus the parties involved will have necessarily considered the possible allocation of charitable contribution deductions based on the taxpayer's cost of acquiring the interest in the pass-through entity. Accordingly, in the view of the Treasury Department and the IRS, it is not unduly burdensome to require the parties to determine the amount of the taxpayer's acquisition cost that is allocable to the property giving rise to the charitable contribution deduction that is being offered.

ii. Relevant Basis Method

The Treasury Department and the IRS recognize that partnerships and S corporations that engage in syndicated conservation easement transactions occurring on or after December 30, 2022, will need to calculate relevant basis for purposes of section 170(f)(19), and, in addition, each investor will need to calculate the amount of the investor's investment for purposes of these listed transaction regulations. To mitigate the burden of potentially duplicative calculations, these final regulations add an alternative method to determine the amount of a taxpayer's investment. These final regulations provide that, for contributions occurring on or after December 30, 2022, taxpayers may use their relevant basis, as determined under section 170(h)(7)(B) and the regulations thereunder, as the amount of their investment for purposes of § 1.6011-9(b)(1).

4. Modification of the Determination of Investment for Qualified Conservation Contributions Protecting Historic Structures

One commenter stated that the proposed anti-stuffing rule did not adequately consider the difference between qualified conservation contributions protecting historic

structures and those protecting natural open space or settings. This commenter stated that, because historic preservation projects protect the historic character of a building, they often require additional investment for rehabilitation; however, the proposed rule did not consider cash raised for, and invested into, the preservation, rehabilitation and maintenance of certified historic structures in the calculation of the investment. The commenter further stated that the proposed regulations did not account for additional monies that need to be invested in a project after an easement is placed to ensure that the conservation purpose is protected in perpetuity. The commenter stated that cash, if invested in the real property, should be considered part of the taxpayer's investment in the real property when applying the 2.5 times rule.

The Treasury Department and the IRS conclude that the commenter's proposed changes to the anti-stuffing method are not warranted. In general, one key element in determining whether a transaction constitutes a syndicated conservation easement listed transaction is the ratio of the amount of the charitable contribution deduction allocation that an investor is offered to the amount the investor pays to obtain that charitable contribution deduction allocation. To that end, the anti-stuffing method measures the amount of the taxpayer's cost of acquiring the interest in the pass-through entity that is attributable to the real property on which a conservation easement is placed (or the portion thereof, if an easement is placed on a portion of the real property) and that gives rise to the charitable contribution deduction. Charitable contribution deductions are based on either the fair market value or adjusted basis of the property that is contributed as of the time of the contribution. *See, e.g.*, section 170(e). Therefore, in the view of the Treasury Department and the IRS, it is inappropriate, in determining the amount of a taxpayer's investment, to look to the amounts expended on the property after the time of the charitable contribution.

In general, every taxpayer that contributes a conservation easement will be required to expend some amounts on the property after the contribution, such as for property taxes. However, amounts of cash that are held for expenditures after the date the conservation easement is contributed, whether for property taxes, repairs, or anything else related to the property, are not as directly related to the resultant charitable contribution deduction that a

taxpayer claims as the expenditures related to the property that precede the conservation easement contribution. The Treasury Department and the IRS have concluded that it is appropriate for the anti-stuffing method to maintain its focus on the amounts invested in the property giving rise to the deduction as of the time of the charitable contribution. In addition, the Treasury Department and the IRS have concluded that a rule that treats certain cash holdings as attributable to the real property if they are "earmarked" for future expenditures related to the property would be difficult to administer. Such a rule would require factually intensive estimations and projections about the amount of future expenditures that would be necessary to fulfill the purposes of the conservation easement (as opposed to merely enhancing the value of the building). For these reasons, the Treasury Department and the IRS have concluded that the final regulations should not adopt this comment. Therefore, the final regulations add a clarification to § 1.6011-9(d)(4)(ii), which states that assets retained to pay for costs related to the operation and maintenance of the real property on which the conservation easement is placed, including costs that may be incurred in future years, are not attributable to the contributed real property.

The Treasury Department and the IRS will continue to consider whether any additional clarifications or modifications to the anti-stuffing method or the alternative relevant basis method of determining the amount of the taxpayer's investment in the pass-through entity would be beneficial in the context of qualified conservation contributions protecting historic structures.

C. Timing Rules

Comments addressed both the timing of the pass-through entity's acquisition of the real property and whether holding the real property for a period of time before the contribution of the conservation easement is made should result in the transaction being excluded from the listed transaction identified in these regulations.

1. Timing of the Pass-Through Entity's Acquisition of the Real Property

Proposed § 1.6011-9(b)(2) provided that one of the steps of a syndicated conservation easement is that the taxpayer acquires an interest directly, or indirectly through one or more tiers of pass-through entities, in the pass-through entity that owns real property (that is, becomes an investor in the

entity). A few commenters asked whether this step is met with respect to investors who acquire an interest in an entity that does not hold real estate at the time the interest in the pass-through entity is acquired. One of these commenters requested that the IRS clearly state if it intends proposed § 1.6011-9(b)(2) to be met in the case of an investor who acquires an interest in a pass-through entity that subsequently acquires real estate or an interest in a pass-through entity holding real estate. The commenter also stated that, if the real property is purchased after the investor invests in the pass-through entity, the transaction would fall outside of the anti-stuffing rule and therefore would be less likely to trigger the 2.5 times rule (because the amount of the taxpayer's investment would never be reduced by the anti-stuffing rule).

The Treasury Department and the IRS note that the proposed regulations clearly stated that the transaction falls within the definition of a syndicated conservation easement transaction "regardless of the order" in which the steps occur; therefore, the proposed regulations already encompassed the scenario in which a taxpayer acquires an interest in the pass-through entity before the pass-through entity acquires the real property. However, for additional clarity, these final regulations make that point explicit in § 1.6011-9(b)(2).

The Treasury Department and the IRS do not agree with the commenter that, if the real property is purchased after the investor invests in the pass-through entity, the transaction falls outside of the reach of the anti-stuffing method. The proposed and final regulations specifically provide that the order in which the four steps of a syndicated conservation easement transaction occur is not relevant. In response to this comment, an example in these final regulations illustrates the application of the anti-stuffing method if the pass-through entity acquires the real property after a taxpayer invests in the pass-through entity.

2. Holding Periods

The proposed regulations did not contain any exceptions from the disclosure requirements for property held on a long-term basis. Several commenters asked that the final regulations include an exception for such transactions. One commenter questioned why investors who have held interests in a pass-through entity for over one year would be required to report the syndicated conservation easement transaction because such

investors would not need to rely on a tacked holding period to avoid the limitations of section 170(e). One commenter contended that contributions of land held for less than three years will generally not be made. Several commenters observed that contributions with a long-term holding period are excepted from the disallowance rule of section 170(h)(7)(A) pursuant to section 170(h)(7)(C). One commenter opined that a hypothetical transaction in which the promotional materials state that the property will be worth more than 2.5 times the taxpayer's investment in ten years should not give rise to a listed transaction. This commenter asked that the final regulations specify the amount of time that must elapse between the purchase of the property interest and the contribution of the easement for a transaction to be listed. Another commenter asked about a taxpayer that inherited land that is then in his possession for over twenty years and decides to donate the land for the benefit and protection of the environment.

The Treasury Department and the IRS conclude that it is not necessary to modify the proposed rules to provide an exception for property that has been held for a period of time. First, tax abuse in syndicated conservation easement transactions is not limited to mismatches between an investor's holding period in its interest in the pass-through entity and the pass-through entity's holding period in the real property on which the conservation easement is placed. For example, even for transactions in which investors may otherwise be eligible to claim a deduction of the fair market value of the conservation easement, the deduction is nonetheless abusive if the easement is improperly overvalued.

Second, as discussed in part III.B. of this Summary of Comments and Explanation of Revisions, the exception to the disallowance rule in section 170(h)(7) for contributions outside of a three-year holding period does not necessitate a similar exception in these final regulations, and these final regulations do not provide an exception for syndicated conservation easements that are described in section 170(h)(7)(C).

Third, notwithstanding the commonly anticipated appreciation of real property values over time, it is not the case that property values always increase. The period a property is held is one element of a fact-intensive inquiry into whether the property has been overvalued. Attempting to craft an exception based on a holding period would result in a

rule that is over-inclusive and/or under-inclusive, depending on the specific facts. The proposed hypotheticals for property held for ten or twenty years seems unlikely to meet all elements of the listed transaction identified in these regulations (for example, it might not be held in a pass-through entity or involve promotional materials). Therefore, the final regulations do not include an exception for long-term holding periods.

D. Definitions

Commenters addressed the definitions of (1) charitable contribution deduction, (2) conservation easement, (3) participant, (4) promotional materials, and (5) syndicated conservation easement transaction.

1. Charitable Contribution Deduction

The proposed regulations defined "charitable contribution deduction" as "a deduction under section 170 of the Internal Revenue Code (Code), which includes a deduction arising from a qualified conservation contribution as defined in section 170(h)(1)."

One commenter stated that this definition is inconsistent with the listed transaction identified in the proposed regulations, which is limited to contributions of conservation easements. This commenter suggested that the definition should be limited to "the deduction arising from a qualified conservation contribution as defined in section 170(h)(1)."

The Treasury Department and the IRS decline to adopt this suggestion, because some substantially similar transactions will involve real property contributions other than qualified conservation contributions.

2. Conservation Easement

The proposed regulations defined a "conservation easement" as "a restriction, within the meaning of section 170(h)(2)(C), exclusively for conservation purposes, within the meaning of section 170(h)(1)(C) and section 170(h)(4), granted in perpetuity, on the use that may be made of the specified property." One commenter stated that, in all cases that the commenter defended, the IRS had taken the position that the conservation easement did not meet one or more of the requirements in this definition. The commenter opined that, if an investor fails to disclose a syndicated conservation easement transaction, the pass-through's return is selected for audit, and the IRS determines that the donated conservation easement fails to meet one or more elements of the definition in the proposed regulations, then the investor would not have had

any reporting obligation because the investor had not claimed a deduction for a "conservation easement" as that term was defined in the proposed regulations. The commenter added that if this was not the intent of the proposed regulation, then the final regulation should clearly so state.

The Treasury Department and the IRS note that the third element of the listed transaction identified in these regulations is that "the pass-through entity that owns the real property contributes an easement on such real property, *which it treats as a conservation easement*, to a qualified organization and allocates, directly or through one or more tiers of pass-through entities, a charitable contribution deduction to the taxpayer" (emphasis added), and that the fourth element of the listed transaction is that "the taxpayer claims a charitable contribution deduction with respect to the contribution of the real property interest on the taxpayer's Federal income tax return." In the commenter's hypothetical, the taxpayer's treatment of the contribution as a conservation easement and claim of a charitable contribution deduction with respect to the conservation easement makes the transaction a listed transaction. Whether the IRS asserts that the conservation easement is invalid and whether the charitable contribution deduction claimed on the taxpayer's Federal income tax return is ultimately allowed do not affect this outcome.

To more clearly track the language in section 170(h), the final regulations modify the definition of conservation easement to provide that it is a restriction (granted in perpetuity) on the use that may be made of the real property, within the meaning of section 170(h)(2)(C), exclusively for conservation purposes, within the meaning of section 170(h)(1)(C) and (h)(4).

3. Participant

The proposed regulations stated that a taxpayer participating, within the meaning of § 1.6011-4(c)(3)(i)(A), in a syndicated conservation easement transaction described in proposed § 1.6011-9(b) includes (1) an owner of a pass-through entity, (2) a pass-through entity (any tier, if multiple tiers are involved in the transaction), and (3) any other taxpayer whose tax return reflects tax consequences or a tax strategy arising from the syndicated conservation easement transaction described in the proposed regulations. The proposed regulations provided, consistent with Notice 2017-10, that a qualified organization to which a

syndicated conservation easement described in proposed § 1.6011–9(b) is donated is not treated as a participant under § 1.6011–4(c)(3)(i)(A) with respect to the listed transaction.

One commenter stated that it is unclear whether a participant who reports the tax consequences of a transaction that is substantially similar to a syndicated conservation easement transaction is a member of the class of participants described under proposed § 1.6011–9(e)(2). The commenter opined that the plain language of the proposed regulation referred only to taxpayers who have the tax consequences of a syndicated conservation easement transaction. To address this comment, the final regulations clarify that the class of participants includes participants in transactions that are the same as, or substantially similar to, syndicated conservation easement transactions.

One commenter requested additional guidance on the meaning of the term “arising from” in proposed § 1.6011–9(e)(2)(iii), stating that it is ambiguous whether an IRS attorney that was hired to enforce syndicated conservation easement transactions would be required to report the transaction because his or her income “arose from” the conservation easement transaction. The Treasury Department and the IRS conclude that further clarification is not needed.

4. Promotional Materials

The proposed regulations stated that “promotional materials” include materials described in § 301.6112–1(b)(3)(iii)(B) and any other written or oral communication regarding the transaction provided to investors, such as marketing materials, appraisals (including preliminary appraisals, draft appraisals, and the appraisal that is attached to the taxpayer’s return), websites, transactional documents such as the deed of conveyance, private placement memoranda, tax opinions, operating agreements, subscription agreements, statements of the anticipated value of the conservation easement, and statements of the anticipated amount of the charitable contribution deduction.

One commenter supported this definition, but several commenters thought it was overbroad, stating that it would be effectively impossible for a taxpayer to prove that he or she did not receive promotional materials. Some commenters objected to particular types of communication being included within the scope of promotional materials. Specifically, commenters expressed concern regarding oral

communications, websites, and documents required by law. For example, one commenter stated that, since promotional materials are described to include “websites” and “oral communication,” every taxpayer would theoretically have received “promotional materials” relating to conservation easement donations because every taxpayer has access to the internet. In addition, one commenter stated that, under the proposed regulations, promotional materials would include an oral communication made to any other investor. The commenter also stated that any one oral communication, regardless of accuracy, would “render the deduction unavailable” to all investors. The commenter recommended that the final regulations remove all references to oral communications.

In response, the Treasury Department and the IRS note that receipt of promotional materials by one investor does not automatically trigger receipt of such materials by other investors (although it is circumstantial evidence that may be relevant to showing receipt of promotional materials by other investors). In addition, the broad definition of promotional materials does not mean that the 2.5 times rule will always be met; the quantity of promotional materials is not directly relevant to whether the promotional materials offer the investor the possibility of being allocated a charitable contribution deduction that equals or exceeds an amount that is two and one-half times the amount of the taxpayer’s investment in the pass-through entity. Moreover, even if the 2.5 times rule is met, the effect is not to render the deduction unavailable to all investors but to meet one element of this listed transaction. The Treasury Department and the IRS conclude that a broad definition of promotional materials is warranted; otherwise, taxpayers may contend that they do not meet the elements of the listed transaction identified in these final regulations because promoters made offers via oral communications, websites, or other documents.

Some commenters noted that Congress did not mention promotional materials in section 170(h)(7) and asked that the final regulations explain the requirement’s significance in the listed transaction. The Treasury Department and the IRS conclude that the lack of reference to promotional materials in section 170(h)(7) is of no significance to this listed transaction, given that the purpose and scope of section 170(h)(7), which is to disallow a deduction, are different from those of these regulations,

which is for the IRS to identify tax avoidance transactions.

One commenter noted that a taxpayer can claim a greatly inflated deduction regardless of whether the taxpayer receives promotional materials and stated that the promotional material requirement appears to be unnecessary and could be removed altogether. The Treasury Department and the IRS have determined that promotional materials are an important attribute of the listed transaction identified in these final regulations because the existence of promotional materials offering investors the possibility of a charitable contribution deduction that equals or exceeds an amount that is 2.5 times the amount of the taxpayer’s investment, on its own, is an element that illustrates tax avoidance. Thus, the final regulations adopt the proposed definition of promotional materials without changes.

One commenter stated that the broad definition of promotional materials does not promote compliance with the law if an attorney that created promotional materials, such as the deed of conveyance, is considered a material advisor to the transaction. This commenter asked for clarity on how the definition of promotional materials in the proposed regulations relates to the definition of a material advisor.

As discussed in part I.D. of this Summary of Comments and Explanation of Revisions, these final regulations do not change the description of a material advisor provided in § 301.6111–3(b). A material advisor is a person who makes a tax statement, as defined in § 1.6111–3(b)(2)(ii), and derives gross income in excess of the threshold amount, as defined in § 301.6111–3(b)(3) (generally, \$10,000 for listed transactions). In general, a deed of conveyance would not be a “tax statement” under § 301.6111–3(b)(2)(ii) because it is not a statement “that relates to a tax aspect of a transaction that causes the transaction to be a reportable transaction.” In addition, in general, the deed does not contain any statements related to a tax aspect of the transaction that causes the transaction to be reportable, such as stating that an investor may be eligible to claim a deduction amount of 2.5 times the investor’s investment.¹ As a result, the final regulations make no

¹ As noted above, a transactional document such as a deed of conveyance is considered to be a promotional material. Although the deed by itself, typically, would not offer the investor the possibility of being allocated a charitable contribution deduction that equals or exceeds an amount that is two and one-half times the amount of the taxpayer’s investment in the pass-through entity, whether all of the promotional materials, taken as a whole, make such an offer is a factual determination.

modifications to the definition of promotional materials in response to the comment.

5. Syndicated Conservation Easement Transaction

One commenter stated that “syndication itself is not bad and is often encouraged by the government” (such as in the context of historic tax credits, low-income housing tax credits, and new market tax credits). The commenter opined that the proposed regulations sow confusion because the focus should be on abuse, not on syndication.

The Treasury Department and the IRS agree with the commenter that syndication in itself is not necessarily abusive. However, the Treasury Department and the IRS do not agree with the commenter that the definition of syndicated conservation easement transaction in § 1.6011–9(b) needs to explicitly use the word “abusive.” The identification of a listed transaction occurs only after the Treasury Department and the IRS have determined that the transaction is a tax avoidance transaction. If a syndicated conservation easement transaction does not meet the elements of the transaction defined in § 1.6011–9(b), such as that the partnership’s promotional materials do not offer investors the possibility of being allocated a charitable contribution deduction the amount of which equals or exceeds an amount that is 2.5 times the amount of the taxpayer’s investment in the partnership (and the partnership does not in fact allocate a charitable contribution deduction the amount of which equals or exceeds an amount that is 2.5 times the amount of the taxpayer’s investment in the partnership), then the transaction is not a listed transaction.

V. Comments Addressing the Role of Qualified Organizations in the Listed Transaction

Commenters addressed both the section 4965 carveout found in the proposed regulations and the lack of a carveout to the definition of material advisor in the proposed regulations for qualified organizations.

A. Section 4965 Carveout

The proposed regulations included, consistent with Notice 2017–10, the section 4965 carveout to exclude a qualified organization² from treatment

as a party to a syndicated conservation easement transaction under section 4965 but requested comments on whether the final regulations should eliminate or limit the section 4965 carveout.

Several commenters advocated for maintaining the section 4965 carveout for various reasons, including that section 170(h)(7)(A) will disallow deductions for most transactions that these regulations seek to deter, that receipt of a donated conservation easement generally would not constitute “net income” or “proceeds” within the meaning of section 4965, and that limiting or eliminating the section 4965 carveout could discourage qualified organizations from accepting contributions of conservation easements (particularly due to uncertainty as to what constitutes a “substantially similar” transaction). With respect to the Treasury Department and the IRS’s request for comments on limiting the carveout to qualified organizations that conduct an adequate amount of due diligence (and on what would constitute adequate due diligence for this purpose), several commenters argued that qualified organizations are not equipped to exercise the due diligence that could be required to qualify for a more limited carveout. Several commenters also claimed that because only a “small number” of qualified organizations continue to facilitate syndicated conservation easement transactions, it would be unfairly burdensome to all other qualified organizations if the section 4965 carveout were limited or eliminated.

Given the addition of section 170(h)(7) to the Code, which disallows charitable contribution deductions for some of the most overvalued syndicated conservation easements, as well as other considerations raised by the commenters, the Treasury Department and the IRS have concluded that it is appropriate to maintain the section 4965 carveout in these final regulations. However, the Treasury Department and the IRS will consider proposing to eliminate or limit the section 4965 carveout in future regulations if qualified organizations continue to facilitate the syndicated conservation easement transactions (or substantially

similar transactions) described in these regulations.

B. Donee Material Advisors

As discussed in part I.D. of this Summary of Comments and Explanation of Revisions, the proposed regulations provided no special rules for material advisors and noted that this differed from the approach taken in Notice 2017–29 (modifying Notice 2017–10), which provided that a donee described in section 170(c) is not treated as a material advisor under section 6111. The proposed regulations requested comments on whether qualified organizations are receiving fees for providing material aid, assistance, or advice with respect to the syndicated conservation easement transactions described in the proposed regulations, the nature of the services being provided, and why a carveout from the definition of material advisor for qualified organizations is needed.

Several commenters requested that the carveout for qualified organizations found in Notice 2017–29 be reinstated, claiming that the six-year look back period would be burdensome, that the IRS is already privy to information necessary to identify potentially abusive syndicated conservation easement transactions via reporting by other material advisors, and that eliminating the carveout for qualified organizations will discourage qualified organizations from accepting legitimate syndicated conservation easements due to confusion and fear of audits, potential penalties, and litigation. On the other hand, no commenter explained how a qualified organization, acting solely in its capacity as a qualified organization, could be considered a material advisor. To the contrary, several commenters asserted that donee organizations do not fit the definition of “material advisor.”

A person is a material advisor with respect to a transaction if the person: (1) provides material aid, assistance, or advice with respect to organizing, managing, promoting, selling, implementing, insuring, or carrying out any reportable transaction; and (2) directly or indirectly derives gross income in excess of the threshold amount defined in § 301.6011–3(b)(3) for the material aid, assistance, or advice. See § 301.6111–3(b)(1). “Gross income” includes all fees for a tax strategy, for services for advice (whether or not tax advice), and for the implementation of a reportable transaction, but a “fee” does not include amounts paid to a person, including an advisor, in that person’s capacity as a party to the transaction. See § 301.6111–3(b)(3)(ii). A person provides material

² A donation of a qualified conservation contribution must be made to a “qualified organization,” generally defined in section 170(h)(3), which includes donations to governmental units, certain public charities, and Type I supporting organizations thereto. Under section 4965(c), the term “tax-exempt entity”

includes, among others, entities and governmental units described in sections 501(c) and 170(c) (other than the United States). Thus, absent the section 4965 carveout, tax-exempt entities that would be affected are donees that are qualified organizations described in section 170(h)(3), other than the United States, that accept a conservation easement as part of the syndicated conservation easement transaction described in these regulations.

aid, assistance, or advice if the person makes or provides a tax statement to or for the benefit of certain taxpayers who are required to make a disclosure under section 6011 (including for participation in a listed transaction) or other material advisors. See § 301.6111–3(b)(2)(i). “Tax statement,” for these purposes, is any statement (including another person’s statement), oral or written, that relates to a tax aspect of a transaction that causes the transaction to be a reportable transaction. See § 301.6111–3(b)(2)(ii)(A).

In a typical conservation easement transaction, the qualified organization signs the Form 8283 (Section B) and provides a contemporaneous written acknowledgement of the contribution. See section 170(f)(8). The qualified organization may also receive separate cash contributions from the donor to monitor and enforce the easement in perpetuity. The qualified organization might also make representations to the donor that it is a qualified organization. Signing the Form 8283 and the contemporaneous written acknowledgement and making representations regarding the donee’s status as a qualified organization are not considered to be making a tax statement under § 301.6111–3(b)(2)(ii)(A). Therefore, a donee does not provide material, aid, assistance, or advice under § 301.6111–3 merely by signing the Form 8283 (Section B) and the contemporaneous written acknowledgement.

The Treasury Department and the IRS conclude that a qualified organization acting solely in its capacity as a qualified organization by, for example, accepting a conservation easement and separate payments or contributions to monitor and enforce that easement, provided such payments or contributions are in fact used for such purpose, would not be considered a material advisor. The Treasury Department and the IRS further conclude that if a qualified organization engages in activities that would result in the organization meeting the requirements to be considered a material advisor, then such organization should be subject to the material advisor rules, including the penalties for failure to disclose. Thus, the final regulations include no special carveout to material advisor status for qualified organizations.

Effect on Other Documents

Notice 2017–10 is obsoleted for transactions occurring after October 8, 2024.

Special Analyses

I. Paperwork Reduction Act

The collection of information contained in these final regulations is reflected in the collection of information for Forms 8886 and 8918 that have been reviewed and approved by the Office of Management and Budget (OMB) in accordance with the Paperwork Reduction Act (44 U.S.C. 3507(c)) under control numbers 1545–1800 and 1545–0865.

To the extent there is a change in burden as a result of these final regulations, the change in burden will be reflected in the updated burden estimates for the Forms 8886 and 8918. The requirement to maintain records to substantiate information on Forms 8886 and 8918 is already contained in the burden associated with the control number for the forms and remains unchanged.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number.

II. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) (5 U.S.C. chapter 6) requires agencies to “prepare and make available for public comment an initial regulatory flexibility analysis,” which will “describe the impact of the rule on small entities.” 5 U.S.C. 603(a). Section 605(b) of the RFA allows an agency to certify a rule if the rulemaking is not expected to have a significant economic impact on a substantial number of small entities.

The Secretary of the Treasury hereby certifies that these final regulations will not have a significant economic impact on a substantial number of small entities pursuant to the RFA. As previously explained, the basis for these final regulations is Notice 2017–10, 2017–4 I.R.B. 544 (modified by Notice 2017–29, 2017–20 I.R.B. 1243, and Notice 2017–58, 2017–42 I.R.B. 326). The following chart sets forth the gross receipts of respondents to Notice 2017–10 that report Federal tax information using Form 1065, *U.S. Return of Partnership Income*, and Form 1120–S, *U.S. Income Tax Return for an S corporation*:

NOTICE 2017–10 ALL FILINGS 2017 TO 2021 RESPONDENTS BY SIZE

Receipts	Respondents (%)	Filings (%)
Under 5M	93.3	88.3
5M to 10M	3.1	5.2
10M to 15M	1.2	2.9
15M to 20M	0.6	0.4
20M to 25M	0.6	0.7

NOTICE 2017–10 ALL FILINGS 2017 TO 2021 RESPONDENTS BY SIZE—Continued

Receipts	Respondents (%)	Filings (%)
Over 25M	1.2	2.5

This chart shows that the majority of respondents to Notice 2017–10 reported gross receipts under \$5 million. Even assuming that these respondents constitute a substantial number of small entities, the final regulations will not have a significant economic impact on these entities because the final regulations implement sections 6111 and 6112 and § 1.6011–4 by specifying the manner in which and time at which an identified transaction must be reported. Accordingly, because the final regulations are limited in scope to time and manner of information reporting and definitional information, the economic impact of the final regulations is expected to be minimal. Further, the Treasury Department and the IRS expect the reporting burden to be low; the information sought is necessary for regular annual return preparation and ordinary recordkeeping. The estimated burden for any taxpayer required to file Form 8886 is approximately 10 hours, 16 minutes for recordkeeping, 4 hours, 50 minutes for learning about the law or the form, and 6 hours, 25 minutes for preparing, copying, assembling, and sending the form to the IRS. The IRS’s Research, Applied Analytics, and Statistics division estimates that the appropriate wage rate for this set of taxpayers is \$102.08 (2022 dollars) per hour. Thus, it is estimated that a respondent will incur costs of approximately \$2,127.00 per filing. Disclosures received to date by the Treasury Department and the IRS in response to the reporting requirements of Notice 2017–10 indicate that this small amount will not pose any significant economic impact for those taxpayers now required to disclose under the final regulations.

Some commenters asserted that the hourly rate estimate of \$98.87 (2021) in the proposed regulations is much lower than what professionals charge to prepare Form 8886. Given the availability of more recent data, the hourly rate estimate is revised in the final regulations to \$102.08 (2022). The new number still does not address the substantial differences from the commenters’ estimates. The differences are likely attributable to the different methodologies used. The commenters likely used the hourly rate that an independent professional would charge

a retail customer to prepare a Form 8886. The Treasury Department and the IRS used the hourly cost that a business owner would pay to employ such a professional. This method was determined based on the comments received from stakeholders objecting to reporting of the retail hourly rate at earlier points.

One commenter asked for the data source for the hourly rate estimate. The source data used by our data unit comes from the Bureau of Labor Statistics.

Some commenters asserted that the estimate of the time to prepare Form 8886 is too low as provided because (1) the estimate ignores the time necessary to comply with the reporting requirement for the years to which the requirement applies retroactively and (2) the estimate does not properly account for some of the time spent, such as learning new topics. At this time, the Treasury Department and the IRS did not find a practical way to adjust the time estimate in response to these comments due to (1) the uncertainties involved and (2) with respect to the prior years, the effect of revealing our underreporting estimates on enforcement.

For the reasons stated, a regulatory flexibility analysis under the RFA is not required. Pursuant to section 7805(f) of the Code, the proposed rule preceding this rulemaking was submitted to the Chief Counsel for the Office of Advocacy of the Small Business Administration for comment on its impact on small business, and no comments were received.

III. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires that agencies assess anticipated costs and benefits and take certain other actions before issuing a final rule that includes any Federal mandate that may result in expenditures in any one year by a State, local, or Tribal government, in the aggregate, or by the private sector, of \$100 million (updated annually for inflation). One commenter argued that it is at least possible that the UMRA trigger of \$100 million could be triggered because of the potential burdens of updating State or local regulations concerning the acceptance of land donations, harmonizing information reporting with the requirements of the regulations, and cooperation with examination proceedings. The Treasury Department and the IRS have considered this comment and conclude that it is not persuasive, particularly in light of the continuing carve-out for donees in these final regulations. This final rule does

not include any Federal mandate that may result in expenditures by State, local, or Tribal governments, or by the private sector in excess of that threshold.

IV. Executive Order 13132: Federalism

Executive Order 13132 (Federalism) prohibits an agency from publishing any rule that has federalism implications if the rule either imposes substantial, direct compliance costs on State and local governments, and is not required by statute, or preempts State law, unless the agency meets the consultation and funding requirements of section 6 of the Executive order. One commenter suggested that, if the Treasury Department and the IRS decide to eliminate the carveout for donees described in section 170(c) from being treated as a party to the transaction under section 4965, then the final regulations will have federalism implications under Executive Order 13132. The final regulations maintain the section 4965 carveout. This final rule does not have federalism implications and does not impose substantial direct compliance costs on State and local governments or preempt State law within the meaning of the Executive order.

V. Regulatory Planning and Review

Pursuant to the Memorandum of Agreement, *Review of Treasury Regulations under Executive Order 12866* (June 9, 2023), tax regulatory actions issued by the IRS are not subject to the requirements of section 6(b) of Executive Order 12866, as amended. Therefore, a regulatory impact assessment is not required.

VI. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), the Office of Information and Regulatory Affairs designated this rule as not a major rule, as defined by 5 U.S.C. 804(2).

Statement of Availability of IRS Documents

Guidance cited in this preamble is published in the Internal Revenue Bulletin and is available from the Superintendent of Documents, U.S. Government Publishing Office, Washington, DC 20402, or by visiting the IRS website at <https://www.irs.gov>.

Drafting Information

The principal authors of these final regulations are Joshua S. Klaber and Eugene Kirman, Office of Associate Chief Counsel (Income Tax & Accounting). Other personnel from the

Treasury Department and the IRS participated in their development.

List of Subjects in 26 CFR Part 1

Income taxes, Reporting and recordkeeping requirements.

Amendments to the Regulations

Accordingly, 26 CFR part 1 is amended as follows:

PART 1—INCOME TAXES

■ **Paragraph 1.** The authority citation for part 1 is amended by adding an entry for § 1.6011–9 in numerical order to read in part as follows:

Authority: 26 U.S.C. 7805 * * *
 * * * * *
 Section 1.6011–9 also issued under 26 U.S.C. 6001 and 6011.
 * * * * *

■ **Par. 2.** Section 1.6011–9 is added to read as follows:

§ 1.6011–9 Syndicated conservation easement listed transactions.

(a) *Identification as listed transaction.* Transactions that are the same as, or substantially similar to, a transaction described in paragraph (b) of this section are identified as listed transactions for purposes of § 1.6011–4(b)(2).

(b) *Syndicated conservation easement transaction.* The term *syndicated conservation easement transaction* means a transaction in which the following steps occur (regardless of the order in which they occur)—

(1) A taxpayer receives promotional materials that offer investors in a pass-through entity the possibility of being allocated a charitable contribution deduction the amount of which equals or exceeds an amount that is two and one-half times the amount of the taxpayer's investment, as determined in paragraph (d)(4) of this section, in the pass-through entity, as determined under paragraph (d) of this section (2.5 times rule);

(2) The taxpayer acquires an interest, directly or indirectly through one or more tiers of pass-through entities, in the pass-through entity that owns or acquires real property (that is, becomes an investor in the entity);

(3) The pass-through entity that owns the real property contributes an easement on such real property, which it treats as a conservation easement, to a qualified organization and allocates, directly or through one or more tiers of pass-through entities, a charitable contribution deduction to the taxpayer; and

(4) The taxpayer claims a charitable contribution deduction with respect to

the contribution of the real property interest on the taxpayer's Federal income tax return.

(c) *Definitions.* The following definitions apply for purposes of this section:

(1) *Charitable contribution deduction.* The term *charitable contribution deduction* means a deduction under section 170 of the Internal Revenue Code (Code), which includes a deduction arising from a qualified conservation contribution as defined in section 170(h)(1) of the Code.

(2) *Conservation easement.* The term *conservation easement* means a restriction (granted in perpetuity) on the use which may be made of the real property, within the meaning of section 170(h)(2)(C) of the Code, exclusively for conservation purposes, within the meaning of section 170(h)(1)(C) and (h)(4) of the Code.

(3) *Pass-through entity.* The term *pass-through entity* means a partnership, S corporation, or trust (other than a grantor trust within the meaning of subchapter J of chapter 1 of the Code).

(4) *Promotional materials.* The term *promotional materials* includes materials described in § 301.6112-1(b)(3)(iii)(B) of this chapter and any other written or oral communication regarding the transaction provided to investors, such as marketing materials, appraisals (including preliminary appraisals, draft appraisals, and the appraisal that is attached to the taxpayer's return), websites, transactional documents such as deeds of conveyance, private placement memoranda, tax opinions, operating agreements, subscription agreements, statements of the anticipated value of the conservation easement, and statements of the anticipated amount of the charitable contribution deduction.

(5) *Qualified organization.* The term *qualified organization* means an organization described in section 170(h)(3) of the Code.

(6) *Real property.* The term *real property* includes all land, structures, and buildings, including a certified historic structure defined in section 170(h)(4)(C) of the Code.

(7) *Substantially similar.* The term *substantially similar* is defined in § 1.6011-4(c)(4). For example, transactions that meet the elements of paragraph (b) of this section, except that the pass-through entity contributes a fee simple interest in real property or a real property interest described in section 170(h)(2)(A) or (B) of the Code rather than a conservation easement, are substantially similar to the listed transaction identified in this section.

(d) *Application of the 2.5 times rule—*
(1) *Bright-line rule.* Transactions for which the promotional materials offer the taxpayer the possibility of being allocated a charitable contribution deduction of only an amount less than 2.5 times the taxpayer's investment and for which the taxpayer is actually allocated a charitable contribution deduction of an amount less than 2.5 times the taxpayer's investment (so that the rebuttable presumption in paragraph (d)(3) of this section does not apply) are generally not considered *substantially similar* to the listed transaction identified in this section. However, if a pass-through entity engages in a series of transactions with a principal purpose of avoiding the application of the bright-line rule in this paragraph (d)(1), the series of transactions may be disregarded or the arrangement may be recharacterized in accordance with its substance. Whether a series of transactions has a principal purpose of avoiding the application of this bright-line rule is determined based on all the facts and circumstances.

(2) *Multiple suggested contribution amounts.* If the promotional materials suggest or imply a range of possible charitable contribution deduction amounts that may be allocated to the taxpayer, the highest suggested or implied contribution amount determines whether the 2.5 times rule in this paragraph (d) is met. In addition, if one piece of promotional materials (for example, an appraisal or oral statement) states a higher charitable contribution deduction amount than stated by other promotional materials, then the highest stated charitable contribution deduction amount determines whether the 2.5 times rule is met.

(3) *Rebuttable presumption.* The 2.5 times rule in this paragraph (d) is deemed to be met if the pass-through entity donates a real property interest within three years following the taxpayer's investment in the pass-through entity, the pass-through entity allocates a charitable contribution deduction to the taxpayer the amount of which equals or exceeds two and one-half times the amount of the taxpayer's investment. This presumption may be rebutted if the taxpayer establishes to the satisfaction of the Commissioner that none of the promotional materials contained a suggestion or implication that investors might be allocated a charitable contribution deduction that equals or exceeds an amount that is two and one-

half times the amount of their investment in the pass-through entity.

(4) *Determining the amount of the taxpayer's investment in the pass-through entity—*(i) *In general.* A taxpayer may determine the amount of the taxpayer's investment in the pass-through entity for purposes of paragraph (b) of this section using either the anti-stuffing method in paragraph (d)(4)(ii) of this section or, for contributions made after December 29, 2022, the relevant basis method in paragraph (d)(4)(iii) of this section. No other methods may be used.

(ii) *Anti-stuffing method.* Under the anti-stuffing method, the amount of a taxpayer's investment in the pass-through entity is the portion of the cash or fair market value of the assets the taxpayer uses to acquire its interest in the pass-through entity that is attributable to the real property on which a conservation easement is placed (or the portion thereof, if an easement is placed on a portion of the real property) that gives rise to the charitable contribution described in paragraph (b)(3) of this section. For example, if a portion of the taxpayer's cost of acquiring the taxpayer's interest in the pass-through entity is attributable to property held directly or indirectly by the pass-through entity other than the real property on which a conservation easement is placed as described in paragraph (b)(3) of this section (such other property may include other real property, cash, cash equivalents, digital assets, marketable securities, or other tangible or intangible assets), that portion of the taxpayer's acquisition cost is not considered part of the taxpayer's investment for purposes of this section because it is not attributable to the portion of the real property on which a conservation easement is placed as described in paragraph (b)(3) of this section. For purposes of this paragraph (d)(4)(ii), assets retained to pay for costs related to the operation and maintenance of the real property on which the conservation easement is placed, including costs that may be incurred in future years, are not attributable to the real property on which a conservation easement is placed as described in paragraph (b)(3) of this section. In the case of a substantially similar transaction described in paragraph (c)(7) of this section, the rules in this paragraph (d)(4)(ii) apply except that the relevant real property that gives rise to the charitable contribution deduction described in paragraph (b)(3) of this section is the real property donated.

(iii) *Relevant basis method.* For contributions made after December 29,

2022, taxpayers may use their relevant basis, as determined in accordance with section 170(h)(7)(B) of the Code and § 1.170A-14(k), as the amount of their investment for purposes of paragraph (b) of this section.

(5) *Examples.* For the examples in this paragraph (d)(5), assume that the partnerships are respected for Federal tax purposes, and that the partnership allocations comply with the rules of subchapter K of chapter 1 of the Code.

(i) *Example 1—(A) Facts.* Individual A purchased an interest in P, a partnership that owns real property with a fair market value of \$500,000 and marketable securities with a fair market value of \$500,000. A is one of four equal investors in P, each of whom purchased its interest in P for \$250,000 of cash. With respect to an investor's \$250,000 payment for its interest in P, the promotional materials stated that P expected to allocate a \$500,000 charitable contribution deduction to the investor (that is, a charitable contribution deduction that is two times the amount an investor paid for its interest in P). After all four investors have purchased their interests in P, P donates a conservation easement on all of its real property to a qualified organization as defined in section 170(h)(3) of the Code and reports a \$2,000,000 charitable contribution on its Form 1065, *U.S. Return of Partnership Income*, based on P obtaining an appraisal indicating that the value of the conservation easement is \$2,000,000. The Schedule K-1 (Form 1065) that P furnishes to A indicates that P allocated a charitable contribution deduction to A for the taxable year. A claims a charitable contribution deduction with respect to the charitable contribution on A's Federal income tax return.

(B) *Analysis.* A's cost of acquiring its interest in P is \$250,000. The real property on which a conservation easement was placed and that gave rise to the charitable contribution deduction described in paragraph (b)(3) of this section was P's property valued at \$500,000. P's only other asset was marketable securities worth \$500,000. Accordingly, half of A's share of the value of the assets held by P was attributable to the real property on which P placed a conservation easement and that gave rise to the charitable contribution deduction described in paragraph (b)(3) of this section. Therefore, under paragraph (d)(4)(i) of this section, for purposes of paragraph (b) of this section, the amount of A's investment in P is \$125,000 (that is, half of A's \$250,000 acquisition cost, which is the portion of A's acquisition cost that is attributable to the real property on

which P placed a conservation easement and that gave rise to the charitable contribution deduction described in paragraph (b)(3) of this section). Because A's investment for purposes of the 2.5 times rule is \$125,000 and A's expected charitable contribution deduction, based on the promotional materials, is \$500,000 (that is, an expected deduction that is four times A's investment), the 2.5 times rule of paragraph (b)(1) of this section is met. The transaction also meets the other elements of a syndicated conservation easement within the meaning of paragraph (b) of this section and therefore is a listed transaction for purposes of § 1.6011-4(b)(2).

(ii) *Example 2—(A) Facts.* Individual B acquires a ten percent interest in InvestCo, a partnership, by making a \$250,000 cash contribution. Immediately after B's acquisition, InvestCo's only asset is \$2,500,000 of cash. The promotional materials state that InvestCo expects to allocate a \$500,000 charitable contribution deduction to B with respect to B's partnership interest. InvestCo pays \$600,000 to purchase marketable securities. InvestCo also purchases an interest in another partnership, PropCo, for \$1,900,000 from one of PropCo's partners. At the same time as the purchase, InvestCo also contributes \$100,000 of its marketable securities to PropCo. Immediately after InvestCo's purchase and contribution, PropCo's only assets are real property worth \$2,400,000 and the marketable securities worth \$100,000. PropCo donates its entire interest in the real property (a fee simple interest) to a qualified organization as defined in section 170(h)(3) of the Code and reports a \$6,250,000 charitable contribution on its Form 1065, *U.S. Return of Partnership Income*, based on PropCo obtaining an appraisal indicating that the value of the real property is \$6,250,000. PropCo allocates a portion of the charitable contribution deduction to InvestCo. The Schedule K-1 (Form 1065) that InvestCo furnishes to B indicates that InvestCo allocated a charitable contribution deduction to B for the taxable year. B claims a charitable contribution deduction with respect to the contribution on B's Federal income tax return.

(B) *Analysis.* Immediately after InvestCo's acquisition of its interest in PropCo, InvestCo's only assets were its interest in PropCo and \$500,000 in marketable securities. Accordingly, eighty percent of InvestCo's funds (\$2,000,000/\$2,500,000) were used to acquire its interest in PropCo. B's investment in InvestCo is \$250,000; therefore, eighty percent of that amount,

\$200,000, is attributable to InvestCo's interest in PropCo. Immediately after InvestCo's acquisition of its interest in PropCo, PropCo had real property worth \$2,400,000 and marketable securities worth \$100,000. As such, ninety-six percent (\$2,400,000/\$2,500,000) of PropCo's assets were the real property that was subsequently donated. Therefore, under paragraph (d)(4)(i) of this section, for purposes of paragraph (b) of this section, the amount of B's investment in InvestCo that is attributable to the donated real property that gave rise to the charitable contribution deduction described in paragraph (b)(3) of this section is \$200,000 multiplied by ninety-six percent, or \$192,000. Because B's investment for purposes of the 2.5 times rule is \$192,000 and B's expected charitable contribution deduction, based on the promotional materials, is \$500,000 (that is, an expected deduction that is at least 2.5 times B's investment), the 2.5 times rule of paragraph (b)(1) of this section is met. The transaction also meets the other elements of a syndicated conservation easement within the meaning of paragraph (b) of this section, except that PropCo contributed a fee simple interest in real property rather than a conservation easement. Under paragraph (c)(7) of this section, the transaction is substantially similar to the listed transaction described in paragraph (b) of this section and, therefore, under paragraph (a) of this section, the transaction in this example is a listed transaction for purposes of § 1.6011-4(b)(2).

(e) *Participation in a syndicated conservation easement transaction—(1) In general.* Whether a taxpayer has participated in a syndicated conservation easement transaction described in paragraph (b) of this section is determined under § 1.6011-4(c)(3)(i)(A).

(2) *Class of participants.* For purposes of § 1.6011-4(c)(3)(i)(A), participants in a transaction that is the same as, or substantially similar to, a syndicated conservation easement transaction described in paragraph (b) of this section include—

- (i) An owner of a pass-through entity;
- (ii) A pass-through entity; and
- (iii) Any other taxpayer whose Federal income tax return reflects tax consequences or a tax strategy arising from a transaction that is the same as, or substantially similar to, the transaction described in paragraph (b) of this section.

(3) *Exclusion.* A qualified organization to which the conservation easement is donated is not treated as a participant under § 1.6011-4(c)(3)(i)(A)

in a syndicated conservation easement transaction described in paragraph (b) of this section.

(f) *Application of section 4965.* A qualified organization to which the real property interest is donated is not treated under section 4965 of the Code as a party to the transaction described in paragraph (b) of this section.

(g) *Disclosures under Notice 2017–10.* A taxpayer who disclosed their participation in a transaction pursuant to Notice 2017–10 and in accordance with § 1.6011–4 before October 8, 2024, is treated as having made the disclosure required under this section and § 1.6011–4, for the years covered by that disclosure, as of the date of the disclosure under Notice 2017–10.

(h) *Applicability date—(1) In general.* This section's identification of transactions that are the same as, or substantially similar to, the transactions described in paragraph (b) of this section as listed transactions for purposes of § 1.6011–4(b)(2) and sections 6111 and 6112 of the Code is effective October 8, 2024.

(2) *Applicability date for material advisors.* Notwithstanding § 301.6111–3(b)(4)(i) and (iii) of this chapter, material advisors are required to disclose only if they have made a tax statement on or after October 8, 2018.

Douglas W. O'Donnell,
Deputy Commissioner.

Approved: September 16, 2024

Aviva R. Aron-Dine,
Deputy Assistant Secretary of the Treasury
(Tax Policy).

[FR Doc. 2024–22963 Filed 10–7–24; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

31 CFR Part 501

Reporting, Procedures and Penalties Regulations

AGENCY: Office of Foreign Assets Control, Treasury.

ACTION: Final rule.

SUMMARY: The Department of the Treasury's Office of Foreign Assets Control (OFAC) is issuing this final rule to amend the Reporting, Procedures and Penalties Regulations (the "Regulations"). OFAC published an interim final rule with a request for comments on May 10, 2024 ("May 2024 Interim Final Rule"). In this final rule, OFAC responds to public comments submitted in response to the May 2024

Interim Final Rule and amends the Regulations to add three exceptions to the reporting requirement for any blocked property that is unblocked or transferred.

DATES: This final rule is effective November 7, 2024.

FOR FURTHER INFORMATION CONTACT: Assistant Director for Licensing, 202–622–2480; Assistant Director for Regulatory Affairs, 202–622–4855; Assistant Director for Compliance, 202–622–2490.

SUPPLEMENTARY INFORMATION:

Background

The Regulations (31 CFR part 501), originally issued August 25, 1997 (62 FR 45098), set forth standard reporting and recordkeeping requirements, license application procedures, and other procedures relevant to the economic sanctions programs administered by OFAC. On May 10, 2024 (89 FR 40372), OFAC published an interim final rule, effective on August 8, 2024, amending the Regulations with a request for comment. Public comments on the interim final rule were due by June 10, 2024.

In the May 2024 Interim Final Rule, OFAC amended the Regulations to require electronic filing of certain submissions to OFAC and to describe and modify certain reporting requirements related to blocked property and rejected transactions. In particular, the rule required the use of the electronic OFAC Reporting System (ORS) for submission of reports related to blocked property and rejected transactions, removed the mail option for certain other types of OFAC submissions, described reports OFAC may require from financial institutions for transactions that meet specified criteria, and added a reporting requirement for any blocked property that is unblocked or transferred. Additionally, OFAC clarified the scope of the reporting requirement for rejected transactions, in part to respond to comments received on an interim final rule OFAC published on June 21, 2019 (84 FR 29055), to amend the Regulations.

Among other changes, the May 2024 Interim Final Rule modified the procedures for requests relating to property that is blocked in error, updated the Regulations with respect to the availability of information under the Freedom of Information Act (FOIA) for certain categories of records, and clarified that persons may submit a petition for administrative reconsideration to seek removal of a person or property from the List of

Specially Designated Nationals and Blocked Persons ("SDN List") or any other list of sanctioned persons maintained by OFAC. OFAC also added a description of reports OFAC may require financial institutions to provide about transactions that meet specified criteria to aid in the identification of blocked property. Finally, OFAC made several technical and conforming edits.

As described further below, OFAC is responding to comments received on five sections of the Regulations: §§ 501.601, 501.602, 501.603, 501.604, and 501.806.

Overview of Comments on the Interim Final Rule

During the public comment period, OFAC received written submissions on the interim final rule. All comments received by the end of the comment period are available on the public rulemaking docket at <https://www.regulations.gov>.

OFAC considered each relevant comment submitted on the May 2024 Interim Final Rule and made certain revisions in this rule in response to the comments. Some of the comments were general in nature, for example, supporting OFAC's efforts and approach with respect to aspects of the May 2024 Interim Final Rule. In contrast, another commentor suggested that OFAC retract the interim final rule altogether either to give time to incorporate the comments received or to give financial institutions more time to incorporate the changes into their sanctions-related programs, systems, and policies and procedures. Some comments requested clarification of specific provisions, deadlines for certain OFAC determinations, modifications to reporting requirements, and a delay for the general requirements to use the ORS. One commenter questioned whether OFAC has the authority to require persons that submitted an erroneous blocking report to request OFAC's permission to release funds that never should have been blocked (e.g., if a financial institution mistakenly blocked the funds of a U.S. person based on a "false hit" name match with a name that appears on the SDN List).

Summary of Comments and Changes From the Interim Final Rule

Reports of Unblocked or Transferred Blocked Property

In the May 2024 Interim Final Rule, OFAC revised § 501.603(b)(3)(i) to require reports within 10 business days of when blocked property is unblocked or transferred, including pursuant to a valid order issued by a U.S. Government

agency or U.S. court, as set out in that paragraph. This amendment enables OFAC to ascertain the current status of blocked and unblocked property. Filers must submit reports pursuant to this section electronically, either via email to OFACReport@treasury.gov or via ORS. Additionally, in revised § 501.603(d)(1), OFAC expanded the retention requirement previously in § 501.603(b)(2)(iii) for Annual Reports of Blocked Property to extend to initial reports of blocked property. In the May 2024 Interim Final Rule, OFAC indicated that reports need not be submitted for credits of interest payments that would not be transfers of blocked property or debits to blocked accounts for normal service charges, in each case as authorized pursuant to OFAC sanctions.

A commenter asked OFAC to modify § 501.603(b)(3)(i) to require reporting: (1) on an annual basis for any unblocking pursuant to an action taken by OFAC, such as a specific license or general license; and (2) within 10 business days only when unblocking is done pursuant to an action not taken by OFAC, such as a court order. Another commenter requested that OFAC amend § 501.603 to clarify that no reporting to OFAC is required should unblocking occur as the result of OFAC removing a person from OFAC's SDN List or the termination of a sanctions program. A third commenter asked whether funds that become unblocked pursuant to a specific license—but are subsequently returned to a financial institution by recipients—are still considered unblocked assets. The commenter also asked if financial institutions have 10 business days from the day a specific license is issued by OFAC to submit an unblocking report, or 10 business days from the day the property is unblocked by the institution. Commenters also requested that OFAC clarify that internal transfers, such as authorized administrative transfers between blocked accounts or transfers of blocked property within the same financial institution, are not subject to the new reporting requirement. One commenter requested clarity on what “transfers” mean in the context of § 501.603(b). The commenter also asked whether “OFAC licenses to unblock property expire.” One commenter asked whether OFAC will issue guidance on the information it expects parties to provide as part of an unblocked property report.

In response to these comments, OFAC is amending § 501.603(b)(3)(i) to clarify that reports need not be submitted pursuant to that section for: (1) authorized transfers of funds or credit by a financial institution between

blocked accounts in its branches or offices or authorized debits for normal service charges; (2) blocked property that is unblocked or transferred pursuant to a general or specific license, unless the license includes a condition that requires the submission of an unblocking report; or (3) blocked property that is unblocked pursuant to OFAC's removal of a person from the SDN List. OFAC is implementing these changes to reduce the reporting burden on the public for unblockings about which OFAC generally does not have a strong interest in obtaining additional information or for which information is received via other reporting channels, while still allowing for tracking the status of blocked property. OFAC declines to make additional changes to § 501.603(b)(3)(i) in order to retain the ability to ascertain the current status of blocked and unblocked property. No changes were made to the rule in response to the remaining comments. OFAC considered the remaining comments, but the comments related to individual scenarios or requested specific guidance that were not within the intended scope of the rule. OFAC has provided guidance on its website related to filing an initial report of blocked property and an annual report of blocked property.

Reports of Rejected Transactions

In the May 2024 Interim Final Rule, OFAC amended § 501.604(a) to clarify the scope of the term “transaction” for purposes of that section by specifying that the term includes transactions related to securities, checks, or foreign exchange, as well as sales or purchases of goods or services, thereby clarifying that securities, checks, foreign exchange, and goods and services are not in and of themselves transactions, when not provided as part of a transaction. OFAC confirmed that the reporting requirement in § 501.604(a) applies to all U.S. persons, as identified in the relevant parts of this chapter (or in the case of part 515, persons subject to U.S. jurisdiction), not only U.S. financial institutions. OFAC amended § 501.604(b) to clarify that the information required therein must be reported only to the extent the information is available to the filer at the time the transaction was rejected.

One commenter stated that the revisions to the definition of “transaction” do not provide sufficient clarity on the scope and types of actions that need to be reported to OFAC by non-financial institutions, including when during a transaction the reporting obligation arises. The commenter requested that the definition of

“transaction” be further revised so that it encompasses only the act of instructing, or otherwise attempting, a transfer of value or a payment. OFAC declines to revise the Regulations in response to this comment because, based on the agency's experience evaluating rejected-transaction reports received over the last five years, it appears that financial institutions and non-financial institutions are able to identify rejected transactions with sufficient clarity to report them to OFAC.

OFAC will assess whether any clarification, modification or guidance related to § 501.604(a) would be appropriate in the future, and welcomes further feedback as we assess whether any clarification, modification, or guidance related to § 501.604(a) is appropriate in the future.

Requests for a Compliance Release of Property Blocked Due To Mistaken Identity or Other Similar Errors

In the May 2024 Interim Final Rule, OFAC revised the procedures at § 501.806 for requesting release of funds blocked due to “mistaken identity” to extend to a broader category of any property blocked due to “typographical or similar errors leading to blocking.” OFAC also narrowed the procedures so they are available only to the person that mistakenly blocked the property. In these cases, the person that mistakenly blocked the property may request a “Compliance Release” from OFAC's Compliance Division. Others may continue to request unblocking of property through license applications submitted to OFAC's Licensing Division.

Commenters asked OFAC to clarify the circumstances that fall under the “similar error” category of bad blocks. One commenter asked OFAC to establish a deadline by which OFAC will respond to compliance release requests (e.g., 30 days). Two commenters requested that OFAC continue to allow any party to a transaction that results in the blocking of funds to submit a request to OFAC for release of the funds, and not to limit the procedures for a compliance release in § 501.806 to persons that mistakenly blocked the property (in the vast majority of circumstances, a financial institution). Furthermore, one commenter questioned whether OFAC had the authority to require persons to request permission from OFAC to release funds that never should have been blocked, especially if no foreign country or national thereof has any interest in such funds (e.g., if a financial institution blocked the funds of a U.S.

person based on a false-hit name match with an SDN). One commenter also asked OFAC to implement a process allowing a financial institution that blocks funds in error to unblock those funds upon notice to OFAC, without submitting a compliance release request. One commenter indicated that in past practice a party could submit to OFAC a notice withdrawing its erroneous blocking report explaining its error and proceed with a contemplated transaction.

No changes were made to the rule in response to these comments. OFAC does not require persons to use the compliance release procedures in § 501.806 for unblocking property believed to have been blocked and reported in error due to mistaken identity or typographical or similar errors. Persons can treat the property that was blocked in error as not blocked in the event they determine that there was never any valid blockable interest in the property, provided that they notify OFAC of the change. OFAC plans to issue guidance regarding unblocking property believed to have been blocked and reported in error due to mistaken identity or typographical or similar errors. OFAC encourages persons to develop screening and due-diligence procedures that appropriately identify blocked property and, as needed, use the process to request a compliance release, which can provide OFAC an opportunity to confirm the factual assessment and help avoid situations where a transaction is erroneously processed or released in violation of U.S. economic sanctions laws. OFAC also encourages financial institutions to conduct an investigation to determine whether a match is a true hit prior to blocking property, consistent with longstanding OFAC guidance. In addition, OFAC declined to specify a deadline for responding to requests for a compliance release because each request is different and may require a different review timeline. Finally, OFAC declined to make the compliance-release procedure available to any party to a blocked asset transaction because specific licensing procedures remain available to those additional parties for release of the blocked funds.

OFAC Reporting System (ORS)

In the May 2024 Interim Final Rule, OFAC generally required filers to use ORS for submission to OFAC of initial reports of blocked property and Annual Reports of Blocked Property pursuant to § 501.603(b)(1) and (2) and reports of rejected transactions pursuant to § 501.604(d).

Commenters indicated that OFAC should not mandate the use of ORS until OFAC resolves its functionality and reliability. Similarly, one commenter requested more engagement with OFAC regarding ORS due to issues when using the reporting system. The commenter asked whether ORS will be updated to allow for filing reports on unblocked property and whether OFAC will issue guidance on what information it expects persons to provide as part of a report of unblocked property.

No changes were made to the rule in response to these comments. OFAC has not experienced issues with the functionality and reliability of ORS and agrees it would be reasonable for OFAC to engage with the public on identified issues when using the ORS and work to resolve them. OFAC already works closely with filers to address any issues in the ORS system, provide guidance and user guides, and answer questions. This final rule does not incorporate any proposed changes to unblocking reports, because the May 2024 Interim Final Rule did not require such reports to be filed through ORS and already sets out the information required for such reports. However, OFAC is planning to develop an unblocking and transfer form in ORS and will notify the public once this feature is deployed.

Instruction To Report Certain Transactions

In the May 2024 Interim Final Rule, OFAC added a note to § 501.602 to describe reports OFAC may require financial institutions to provide about accounts or transactions that meet specified criteria to aid in the identification of blocked property. If OFAC has reason to believe an account or transaction (or class of transactions) may involve the property or interests in property of a blocked person, OFAC may instruct the financial institution to report transactions that meet specified criteria and to notify OFAC prior to processing such transactions. Upon review, OFAC may determine that a reported transaction involves the property or interests in property of a blocked person and may take further action.

A commenter recommended that OFAC implement a deadline for a determination as to whether a transaction is blocked (e.g., within 10 business days) to help manage customer expectations while waiting for determination on transactions that may involve a blocked interest and make the process more predictable for banks and their customers.

No changes were made to the rule in response to this comment due to the

volume of notifications OFAC may receive and the transaction-specific analysis required for each determination. In addition, the benefits of managing customer expectations are outweighed by the national security and foreign policy risks of releasing blocked property. Customers may also reach out to OFAC's Compliance Division with questions about the status of their funds.

Recordkeeping Requirements

Section 501.601 requires every person engaging in any transaction subject to the provisions of chapter V of title 31 of the Code of Federal Regulations to keep a full and accurate record of each such transaction engaged in, regardless of whether such transaction is conducted pursuant to a license or otherwise, and make such record available for examination for at least five years after the date of such transaction. The 21st Century Peace through Strength Act, Public Law 118–50, div. D, signed into law on April 24, 2024, extended the statutes of limitation for civil and criminal violations of economic sanctions programs under the International Emergency Economic Powers Act, 50 U.S.C. 1701 *et seq.*, or the Trading With the Enemy Act, 50 U.S.C. 4301 *et seq.*, from five to 10 years.

A commenter indicated that OFAC should provide ample notice to the public prior to revising the recordkeeping requirement from five to 10 years. On September 12, 2024, OFAC issued a separate interim final rule updating the records and recordkeeping requirements in § 501.601, with a delayed effective date and an opportunity to provide comments (89 FR 74832).

Electronic Availability

This document and additional information concerning OFAC are available on OFAC's website: <https://ofac.treasury.gov>.

Public Participation

Because the amendment of the Regulations is a rule of agency procedure and involves a foreign affairs function, the provisions of Executive Order 12866 of September 30, 1993, "Regulatory Planning and Review" (58 FR 51735, October 4, 1993), as amended, and the Administrative Procedure Act (5 U.S.C. 553) requiring notice of proposed rulemaking and opportunity for public participation are inapplicable. Because no notice of proposed rulemaking is required for this rule, the Regulatory Flexibility Act (5 U.S.C. 601–612) does not apply.

Paperwork Reduction Act

Pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3507), the collections of information related to this rule have been approved by the Office of Management and Budget under control number 1505–0164. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid control number.

List of Subjects in 31 CFR Part 501

Administrative practice and procedure, Banks, banking, Blocking of assets, Foreign trade, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, the interim rule amending 31 CFR part 501, which was published May 10, 2024 (89 FR 40372), is adopted as final with the following change:

PART 501—REPORTING, PROCEDURES AND PENALTIES REGULATIONS

■ 1. The authority citation for part 501 continues to read as follows:

Authority: 8 U.S.C. 1189; 18 U.S.C. 2332d, 2339B; 19 U.S.C. 3901–3913; 21 U.S.C. 1901–1908; 22 U.S.C. 287c, 2370(a), 6009, 6032, 7205, 8501–8551; 31 U.S.C. 321(b); 50 U.S.C. 1701–1706, 4301–4341; Pub. L. 101–410, 104 Stat. 890, as amended (28 U.S.C. 2461 note).

Subpart C—Reports

■ 2. Amend § 501.603 by revising and republishing paragraph (b)(3)(i) to read as follows:

§ 501.603 Reports of blocked, unblocked, or transferred blocked property.

* * * * *

(b) * * *
(3) * * *

(i) *When reports are due.* Except as provided in paragraphs (b)(3)(i)(A) through (D) of this section, reports shall be submitted to OFAC within 10 business days from the date blocked property is unblocked or transferred. For example, such reports must be filed when blocked property is unblocked or transferred pursuant to a valid order from a U.S. Government agency or U.S. court, including pursuant to a valid judicial order issued pursuant to section 201(a) of the Terrorism Risk Insurance Act (Pub. L. 107–297, 116 Stat. 2322, 28 U.S.C. 1610 note) or a valid order of forfeiture by any U.S. Government agency or U.S. court. Reports do not need to be filed under this section for:

- (A) Authorized debits to blocked accounts for normal service charges;
- (B) Authorized transfers of funds or credit by a financial institution between

blocked accounts in its branches or offices;

(C) Unblocking or transfer of blocked property that is explicitly authorized by a specific or general license, unless the specific or general license includes a condition requiring the submission of a separate unblocking report; or

(D) Unblocking of blocked property pursuant to OFAC's removal of a person from OFAC's List of Specially Designated Nationals and Blocked Persons (SDN List).

* * * * *

Lisa M. Palluconi,

Acting Director, Office of Foreign Assets Control.

[FR Doc. 2024–23217 Filed 10–7–24; 8:45 am]

BILLING CODE 4810–AL–P

DEPARTMENT OF HOMELAND SECURITY**Coast Guard****33 CFR Part 100**

[Docket No. USCG–2024–0900]

Safety Zone; Battle of the Basin Boat Races Morgan City, LA

AGENCY: Coast Guard, DHS.

ACTION: Notification of enforcement of regulation.

SUMMARY: The Coast Guard will enforce the regulations for the Battle of the Basin Boat Races between mile marker (MM) 4 and MM 5 on the Morgan City, Port Allen Route, Louisiana (LA). This action is necessary to provide for the safety of life on these navigable waters near Morgan City, LA during high speed boat races on October 26, 2024 and October 27, 2024. During the enforcement periods, the operator of any vessel in the regulated area must comply with directions from the local Patrol Commander.

DATES: The regulations in 33 CFR 100.801 will be enforced from 10 a.m. to 6 p.m. on October 26, 2024 and October 27, 2024.

FOR FURTHER INFORMATION CONTACT: If you have questions about this notice of enforcement, call or email Lieutenant Jenelle Piché, Marine Safety Unit (MSU) Morgan City, U.S. Coast Guard; telephone 985–855–0724, email Jenelle.L.Piche@uscg.mil.

SUPPLEMENTARY INFORMATION: The Coast Guard will enforce the regulations set forth in 33 CFR 100.801 for the Battle of the Basin Boat Races. The regulations will be enforced from 10 a.m. to 6 p.m. on October 26, 2024 and October 27,

2024. This action is being taken to provide for the safety of life on navigable waterways during this event, which will be located between MM 4 and MM 5 on the Morgan City, Port Allen Route, LA. The Patrol Commander may be contacted on Channel 16 VHF–FM by the call sign “PATCOM.” During the enforcement periods, if you are the operator of a vessel in the regulated area you must comply with the regulations set forth in 33 CFR 100.801.

In addition to this notification of enforcement in the **Federal Register**, the Coast Guard plans to provide notification of this enforcement period via a Safety Marine Information Broadcast and Broadcast Notice to Mariners.

Dated: September 25, 2024.

J.S. Franz,

Captain, U.S. Coast Guard, Captain of the Port Houma.

[FR Doc. 2024–23179 Filed 10–7–24; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 52**

[EPA–R10–OAR–2023–0600, FRL–11593–02–R10]

Air Plan Approval; OR; Regional Haze Plan for the Second Implementation Period

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving the regional haze state implementation plan revision submitted by Oregon on April 29, 2022, as supplemented on November 22, 2023, as satisfying applicable requirements under the Clean Air Act and the EPA's Regional Haze Rule for the program's second implementation period. The Oregon submission addressed the requirement that states must periodically revise their long-term strategies for making reasonable progress towards the national goal of preventing any future, and remedying any existing, anthropogenic impairment of visibility, including regional haze, in mandatory Class I Federal areas. The Oregon submission also addressed other applicable requirements for the second implementation period of the regional haze program.

DATES: This final rule is effective November 7, 2024.

ADDRESSES: The EPA has established a docket for this action under Docket ID

No. EPA-R10-OAR-2023-0600. All documents in the docket are listed on the <https://www.regulations.gov> website. Although listed in the index, some information is not publicly available, e.g., Confidential Business Information or other information the disclosure of which is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available at <https://www.regulations.gov>, or please contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information.

FOR FURTHER INFORMATION CONTACT: Jeff Hunt, EPA Region 10, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101, at (206) 553-0256 or hunt.jeff@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, wherever “we” or “our” is used, it means the EPA.

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I. Background

On February 23, 2024, the EPA proposed to approve the regional haze state implementation plan (SIP) revision submitted by Oregon on April 29, 2022, as supplemented on November 22, 2023, as satisfying applicable requirements under the Clean Air Act (CAA) and the EPA’s Regional Haze Rule (RHR) for the program’s second implementation period (89 FR 13622).

The public comment period for our proposed action was originally scheduled to close on March 25, 2024. However, on February 28, 2024, we received a request to extend the public comment period an additional 30 days.¹ On March 14, 2024, we published a document in the **Federal Register** extending the public comment period end date from March 25, 2024, to April 24, 2024 (89 FR 18866).

We received four comments. We determined that two comments were not germane to our action, for the following reasons. One commenter expressed opposition to the cultivation of cannabis, asserting general air pollution concerns. The commenter did not provide any tangible connection to the regional haze requirements or the Oregon submission. The EPA acknowledges the commenter’s concerns; however, the comment is outside the scope of this action and does not indicate that the EPA’s approval of the SIP submission is inconsistent with the CAA. Oversight of cannabis farms is unrelated to this regional haze action.

A second commenter cited some details from the Oregon regional haze plan, asserting a connection to transmission of the coronavirus. However, the commenter provided no logical basis for this assertion. The EPA acknowledges the commenter’s concerns; however, the comment is outside the scope of this action and does not indicate that the EPA’s approval of the SIP submission is inconsistent with the CAA. Potential connections between air pollution and respiratory viruses on public health is unrelated to this regional haze action.

We also received two germane comments. One was submitted by the National Park Service (NPS). The second was submitted by Earthjustice on behalf of a coalition of environmental organizations consisting of Cully Air Action Team, National

Parks Conservation Association, Neighbors for Clean Air, Northwest Environmental Defense Center, Oregon Environmental Council, Sierra Club, and Verde (Environmental Organizations). The full text of the comments may be found in the docket for this action. We have summarized the comments and provided our responses in section II. of this preamble. Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Clean Air Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA’s role is to approve state choices, provided that they meet the criteria of the Clean Air Act.

II. EPA Responses to Comments Received

A. National Park Service Comments

1. Federal Land Manager Consultation

Comment: “[W]e would like to make the EPA aware that the Oregon SIP process did not meet the requirements for Federal Land Manager (FLM) consultation . . . The NPS participated in early, informal engagement with the Oregon Department of Environmental Quality (ODEQ) regarding SIP development beginning in January of 2020. This productive collaboration included a meeting, subsequent written documentation, and staff-to-staff technical feedback on individual facility four-factor analyses as documented in the Oregon SIP. The NPS appreciates the extensive efforts that Oregon invested in early communication. However, many of the draft conclusions and determinations presented to the NPS during early engagement were not incorporated into the draft SIP released for public review in late August 2021. In fact, the public comment draft included substantial changes to the facility-specific control determinations in comparison with what the NPS had reviewed previously.”

Response: The EPA disagrees with the commenter’s assertion that Oregon did not meet the requirements for Federal Land Manager (FLM) consultation in 40 CFR 51.308(i). As described below, ODEQ met all of the FLM consultation statutory and regulatory requirements.

Chapter 6.3 *Consultations with Federal Land Managers* of the April 29, 2022, SIP revision contained documentation of the extensive outreach with the NPS. This included providing a May 5, 2021, draft of the regional haze plan explicitly for the purpose of FLM consultation (May 2021 FLM draft). A key element of 40 CFR

¹ This extension request letter may be found in the docket for this action.

51.308(i)(2) is that consultation occur early enough in a state's policy analyses of its long-term strategy so that information and recommendations provided by the FLMs can meaningfully inform a state's decisions on the long-term strategy. Chapters 6.3.3 *Federal Land Manager Review of Draft State Implementation Plan* and 6.3.4 *Federal Land Manager Comments and DEQ Responses* contained Oregon's responses to all comments received as part of the May 2021 FLM draft review process and prior consultation outreach. The NPS's characterization of this effort as "informal consultation" is not consistent with the EPA's regulations. The requirements of 40 CFR 51.308(i)(2) contain no bifurcation of "informal" versus "formal" consultation. Consistent with the preamble of the EPA's 2017 Regional Haze Rule, the Oregon Department of Environmental Quality (ODEQ) made a good faith effort to involve the NPS early in development of the long-term strategy. The RHR preamble specifically states that consultation should be used to inform "decisions that are *about to be made* by the state on its long-term strategy . . ." (emphasis added).² ODEQ used the comments and feedback from the May 2021 FLM consultation draft to inform the final control determinations contained in the draft provided for public notice and comment period starting on August 27, 2021 (August 2021 public comment draft). The interpretation that all control determinations must be finalized before initiating FLM consultation is not supported by the text of 40 CFR 51.308(i), nor is it in keeping with the intent of 40 CFR 51.308(i) to foster early engagement.

In addition to the May 2021 FLM consultation draft process, ODEQ provided opportunity for review and comment on the August 2021 public draft. In response to public interest, ODEQ extended the public comment period for an additional 30 days, going from August 27, 2021, to November 1, 2021, so that all parties had adequate time to review the technical determinations. The NPS used this opportunity to provide additional comments which are included in Chapter 6.6 *Public Comments and Responses* of the April 29, 2022, SIP revision, along with ODEQ's responses to the comments.³

Also, in response to NPS and Environmental Organizations' concerns, ODEQ supplemented the regional haze

SIP on November 22, 2023, with appendices 1 through 6 (2023 supplement). These appendices contained additional correspondence used by ODEQ in making control determinations under the statutory four factors for Boise Cascade Wood Products, LLC—Elgin Complex, Boise Cascade Wood Products, LLC—Medford, Georgia Pacific—Wauna Mill, Georgia Pacific—Toledo LLC, Cascade Pacific Pulp, LLC—Halsey Pulp Mill, and International Paper Company—Springfield Mill. As acknowledged by the NPS, ODEQ conducted FLM consultation on the 2023 supplement and included NPS comments in Section 6: *Response to Federal Land Manager Review Comments*.

For the reasons stated above, it is our determination that ODEQ adequately conducted FLM consultation and has thus fulfilled the requirements of 40 CFR 51.308(i).

2. Use of the Four Statutory Factors in Determining Reasonable Progress

Comment: "The NPS recommends that states, including Oregon, base reasonable progress control determinations on the four statutory factors identified in § 7491(g)(1) of the Clean Air Act (CAA). The NPS suggests that it may not be sufficient to consider the factors and then select a less protective control measure (or permit reduction) that is unrelated to the four-factor analysis. We recommend that determinations not clearly based on the four factors should demonstrate how the alternative measure is reasonable and/or equivalent to the outcome of the four-factor analysis."

Response: The EPA agrees with the NPS that reasonable progress control determinations must be grounded in the state's consideration of the four statutory factors identified in CAA section 169A and 40 CFR 51.308(f)(2). In section IV.E.b of our proposed rulemaking, *The EPA's Evaluation of the Oregon Long-Term Strategy*, we explained how the Oregon process was grounded in the four-factor analysis (FFA) process.⁴ However, the NPS's characterization that ODEQ's January 2021 "Preliminary Determination of Cost Effective Controls for Regional Haze" letters constituted final four-factor determinations, and all subsequent correspondence and action was outside the four-factor framework is an inaccurate characterization of the Oregon process.⁵ The EPA will reiterate

key aspects from our proposed rulemaking as well as details from Chapter 3.4 *Four Factor Analysis* of Oregon's April 29, 2022, regional haze plan.

Oregon Administrative Rules (OAR) Division 223 *Regional Haze Rules* dictated the regulatory processes for determining the controls necessary for reasonable progress. OAR 340–223–0110(1) required all affected facilities to submit four-factor analyses. The required contents of the four-factor analyses were specified in OAR 340–223–0120, which mirrored the four statutory factors of CAA section 169A(g)(1). Of the 17 facilities that submitted four-factor analyses in accordance with this rule, nearly all affected facilities submitted detailed demonstrations developed by independent consulting firms and/or certified professional engineers asserting that no feasible or cost-effective controls were available in applying the four-factors.⁶ Only 2 facilities, Owens-Brockway Glass Container Inc. and Gilchrist Forest Products found cost effective controls under the four factors.

Rather than simply relying on these submissions to satisfy 40 CFR 51.308(f)(2), Oregon engaged with the affected facilities to identify feasible control options. Specifically, ODEQ issued "Preliminary Determination of Cost Effective Controls for Regional Haze" letters proposing more stringent controls unless facilities could further demonstrate that the measures were truly not cost effective or technically feasible. This initiated the process between January 2021 and August 2021 when ODEQ assessed and determined final control determinations under the four factors, primarily based on the technical feasibility and cost correspondence documented in appendices 1–6.⁷

Thus, these preliminary letters did not replace the four factor analyses submitted by the affected facilities. Nor were the preliminary letters final determinations on what controls are feasible and necessary for reasonable progress under OAR 340–223–120(4) or 40 CFR 51.308(f)(2). Rather, these preliminary determinations letters were a result of ODEQ's initial adjustment of the four-factor analyses submitted by the affected facilities based on

Regional Haze" letters are included in the docket for this action.

⁶ Complete copies of the four-factor analyses are included in the docket for this action.

⁷ Complete copies of appendices 1–6 were included in the November 2023 supplement to the regional haze plan and are also included in the docket for this action (document numbers 246–251).

² See 82 FR 3078 (January 10, 2017) at page 3116.

³ See Oregon's April 29, 2022, submission, pages 136–140 (comment numbers 6–9).

⁴ See 89 FR 13622 (February 23, 2024) at page 13637.

⁵ Complete copies of the "Preliminary Determination of Cost Effective Controls for

additional information and to aid in a consistent review across all four-factor analyses.⁸ Consistent with 40 CFR 51.308(f)(2) and OAR 340–223–120(4), ODEQ determined the controls necessary for reasonable progress *after* issuing the preliminary determinations and collecting and analyzing additional information from the facilities regarding the four statutory factors. As ODEQ explained in its response to comments

on the initial SIP submission, in some cases ODEQ agreed with facilities that controls it preliminarily proposed were not technically feasible or cost effective.⁹ Ultimately, Oregon's submission demonstrates that it determined the controls necessary for reasonable progress based on its consideration of the four statutory factors and thus met the requirements of 40 CFR 51.308(f)(2).

Table 1 of this preamble provides a comparison of the controls evaluated in the four factor analyses submitted by the sources and the controls Oregon ultimately included in its long-term strategy. The exact facility-by-facility determinations are described in more detail in the Proposal and in subsequent responses to facility-specific comments in section II of this preamble.

TABLE 1—COMPARISON OF FOUR-FACTOR ANALYSIS CONTROLS AND FINAL CONTROLS

[Please see the footnotes for technical feasibility issues identified in the four-factor analyses]

Facility	Controls below \$10K/per ton reduction threshold in four-factor analyses submitted pursuant to OAR 340–223–0110(1) using recent actual or projected actual emissions (if provided) ¹⁰	Final controls imposed by ODEQ
Biomass One, L.P	None	Installation of continuous emissions monitoring system (CEMS) and NO _x optimization plan on North and South boilers. If the permittee is able to finalize a new power purchase agreement, the permitted must evaluate installation of selective catalytic reduction (SCR).
Boise Cascade Wood Products, LLC—Elgin Complex.	Selective non-catalytic reduction (SNCR) (\$9,523) and SCR (\$9,538). ¹¹	Installation of CEMS and NO _x combustion improvement project.
Cascade Pacific Pulp, LLC—Halsey Pulp Mill.	None	Fuel restrictions and power boiler emissions unit replacement.
EVRAZ Inc. NA	Baghouse for slab cutting operations (\$7,301). ¹²	Low NO _x burners (LNB) on reheat furnace.
Gas Transmission Northwest LLC—Compressor Station 13.	None	SCR or emissions unit replacement on turbines 13C and 13D.
Georgia-Pacific—Toledo LLC	Low NO _x burners with flue gas recirculation (LNB/FGR) on boiler 1 (\$7,083). SNCR on boilers 1 (\$7,706) and 4 (\$7,630). ¹³	LNB/FGR and CEMS on boilers 1, 3, and 4, or unit replacement on one or more boilers.
Georgia Pacific—Wauna Mill	(LNB/FGR) on power boiler (\$9,223)	LNB/FGR and CEMS on power boiler, LNB for paper machine 5, and emissions limits for paper machines 6 and 7.
Gilchrist Forest Products	None ¹⁴	Installation of electrostatic precipitator on units B–1 and B–2.
International Paper—Springfield	None	Fuel restrictions, installation of CEMS on power boiler, and emissions limits.
Northwest Pipeline LLC—Oregon City Compressor Station.	Low Emission Combustion Retrofit (\$8,809)	Emissions unit replacement and emissions limit.
Owens-Brockway Glass Container Inc	Catalytic ceramic filters for furnaces A (\$5,256) & D (\$5,035).	Furnace A shut down and PSEL limit imposed. ¹⁵
Pacific Wood Laminates, Inc	None	ODEQ determined no controls <\$10K.
Roseburg Forest Products—Dillard	SNCR on boilers 1 (\$4,363), 2 (\$4,170), and 6 (\$3,635).	Installation of CEMS and imposition of emissions limits. Permittee must install SNCR by June 30, 2025, if emissions limits are not met.
Willamette Falls Paper Company	None	Fuel restrictions and Plantsite Emissions Limit (PSEL) reduction.
Woodgrain Millwork LLC—Particleboard.	None	ODEQ determined no controls <\$10K.

⁸ See OAR 340–223–0120(2) and (3).

⁹ See Oregon Environmental Quality Commission Meeting, February 3–4, 2022, 1001_1.1_StaffReport_wAttachments Comment #17 at Item C 000035.

¹⁰ This table was created using the EPA's 2019 Guidance recommendation to use projected actuals or recent actuals in cost-effectiveness calculations.

¹¹ The four-factor analysis raised technical feasibility and cost barriers in the determination that, “Based on the Four Factor analysis presented above, no additional controls were determined to be cost effective for the biomass boilers at the Elgin Mill.” See 106_SAFOWoodProducts31–0006Elgin.pdf, at page 2–25. Correspondence related to these issues is included in 246_3.3.2_Appendix1_Boise.Cascade.Elgin_Correspondence.pdf, included in the docket for this action.

¹² ODEQ did not pursue this control option, presumably because associated potential PM₁₀ emissions were low (69 tons per year) relative to potential NO_x emissions (367 ton per year) and the significant difference between allowable PSEL emissions (Q/d = 11.92) and actual emissions (Q/d = 3.57). ODEQ instead proposed NO_x controls in the January 2021 preliminary determination letter. See 120_haze-EVRAZ.pdf, included in the docket for this action.

¹³ The four-factor analysis argued, “A formal engineering analysis would be required to ultimately determine if SNCR would be effective on the boilers. This type of analysis would include obtaining temperature and flow data, developing a model of each boiler using computational fluid dynamics, determining residence time and degree

of mixing, determining placement of injectors, and testing.” See 132_haze-GeorgiaPacific-Toledo-FFA.pdf, at page 2–19.

¹⁴ In a letter dated September 11, 2020, Gilchrist agreed that installation of an Electrostatic Precipitator on boilers B–1 and B–2 would be cost-effective, and provided a letter from a boiler vendor indicating that retrofitting those boilers with Selective Non-Catalytic Reduction was not technically feasible. See April 22, 2022 regional haze SIP at page 77.

¹⁵ Catalytic ceramic filter imposed on furnace D by separate enforcement action. See 701_OwensBrockway2020–208MAO.pdf included in the docket for this action.

3. Use of Permitted Emissions Limits To Align Allowable Emissions With Actual Emissions

Comment: “We note that the Oregon SIP process allowed some facilities to accept permitted emission reductions to lower their surrogate visibility impact (emissions over distance or Q/d) to just below the threshold for selection rather than requiring implementation of cost-effective emission controls that were identified through a four-factor analysis . . . The NPS agrees that in cases where recent actual emissions would not have triggered source selection, permit adjustments may be an appropriate anti-backsliding measure. However, in cases where recent actual emissions exceed the established selection criteria (e.g., Kingsford Manufacturing Company and Owens-Brockway Glass Container Inc.), we recommend that facilities not be allowed to back out of selection by accepting permitted emission reductions in lieu of implementing cost-effective emission controls identified through four-factor analyses.”

Response: The EPA agrees that in cases where recent actual emissions would not have triggered source selection, permit adjustments are an appropriate anti-backsliding measure. As demonstrated in table 4 of our proposed rulemaking, this was the case for all facilities that accepted Plant Site Emission Limits (PSELs) for nitrogen oxides (NO_x), sulfur dioxide (SO₂), and/or coarse particulate matter (PM₁₀), except the two cases noted by the NPS, Kingsford Manufacturing Company and Owens-Brockway Glass Container Inc.¹⁶ Information on Kingsford Manufacturing was included as a footnote to table 4, “ODEQ reviewed Kingsford Manufacturing Company which originally screened into analysis with a Q/d = 8.39 based on actual emissions as reported to the 2017 National Emissions Inventory (NEI) because a 2017 PSEL was not available at that time. However, in a letter dated May 22, 2020, ODEQ acknowledged a 2019 permit modification that had already lowered PSELs for NO_x, SO₂, and PM₁₀ to a Q/d = 4.02.” ODEQ used this 2019 information, and the accompanying PSEL conditions submitted in the Title V permit for approval into Oregon’s SIP, in making its May 22, 2020, determination that “that Kingsford is not required to perform a four factor analysis for their Springfield facility during this round of the Regional Haze program.”¹⁷ In a case

like Kingsford Manufacturing Company, where contemporaneous information shows a significant, permanent change in emissions, we believe it was reasonable for Oregon to reassess the agency’s source selection and control determination to incorporate more recent information.

Similarly, ODEQ’s evaluation of control for the Owens-Brockway facility was influenced by contemporaneous events. Owens-Brockway was one of the few facilities that identified feasible cost-effective controls in the four-factor analysis process.¹⁸ As noted by the commenter, in an October 27, 2020, letter ODEQ concurred with the findings that combined control of NO_x, SO₂ and PM by catalytic ceramic filters (CCF) was cost-feasible for glass-melting furnaces A and D at the Owens-Brockway Portland facility.¹⁹ Subsequently, in June 2021, ODEQ initiated an enforcement response for air quality violations unrelated to the regional haze program.²⁰ The enforcement response was still in progress during the summer of 2021, therefore ODEQ could not rely on the remedy being negotiated to resolve the human health violations (shutdown or imposition of pollution controls on Furnaces D).²¹ Instead, ODEQ negotiated and submitted a separate August 9, 2021, order focused specifically on reasonable progress for regional haze program.²² This order enshrined the shutdown of Furnace A and associated emissions reductions.

The EPA disagrees with the commenter that the Regional Haze Rule prohibits a state which selects sources based on allowable emissions from refining its source selection based on permanent and enforceable reductions in allowable emissions. ODEQ determined that sources with a Q/d < 5 based on PSELs are not significant contributors to visibility impairment in Class I areas. Hence, controls on these sources are not necessary for reasonable progress. This holds true regardless of when in its SIP development process ODEQ made the determination. Most importantly, ODEQ ensured the PSEL reductions upon which it relied to determine that controls on Owens-Brockway were not necessary and were permanent and enforceable by

submitting a source-specific SAFO and conditions from Owens-Brockway’s title V permit.

4. Use of a Stipulated Agreement and Final Order (SAFO) Versus a Unilateral Order

Comment: “. . . Oregon proposed alternative compliance options for several facilities in lieu of reasonable, cost-effective controls identified through the four-factor review process. In general, the NPS has concerns with this approach and previously shared this view with Oregon in staff-to-staff meetings between 2020 and 2023, and in writing via October 2021 public comments on the draft SIP and August 2023 consultation comments on the Oregon SIP supplement . . . The NPS also agrees that alternative compliance measures can be considered reasonable when accompanied by a technical demonstration that the emission reductions achieved will be equivalent to or better than those that would have resulted from requiring the controls identified through four-factor analysis. The NPS recommends that EPA require a technical demonstration detailing the actual emission reductions that will be achieved through alternative compliance and why the alternative compliance options are reasonable in light of the four statutory factors.”

Response: The EPA disagrees that additional technical demonstrations are required to justify ODEQ’s determinations of the controls necessary for reasonable progress. As explained in our response to comment in section II.A.2 “Use of the Four Statutory Factors in Determining Reasonable Progress” of this preamble, characterizing the January 2021 “Preliminary Determination of Cost Effective Controls for Regional Haze” letters as final four-factor control determinations and all subsequent correspondence and decisions after the preliminary letters as being outside the four-factor process is not an accurate portrayal of the Oregon process. Under OAR 340–223–0110(1), each affected facility was required to conduct a four-factor analysis compliant with OAR 340–223–0120 *Four Factor Analysis*. Using its authority under OAR 340–223–0120(3), ODEQ adjusted the four-factor analyses for consistency with basic inputs such as interest rates, equipment lifetime, and potential to emit (PSEL) in determining the proposed cost-effective controls.²³ However, it is clear from the text that the January 2021 preliminary letters are not final determinations nor

¹⁶ See 89 FR 13622 (February 23, 2024) at page 13639.

¹⁷ See 142_haze-KingsfordManufCo.pdf in the docket for this action.

¹⁸ See 149_haze-Owens-Brockway-FFA.pdf in the docket for this action.

¹⁹ See 150_haze-Owens-Brockway.pdf in the docket for this action.

²⁰ See <https://www.oregon.gov/deq/programs/pages/owensbrockway.aspx>.

²¹ See 701_OwensBrockway2020–208MAO.pdf in the docket for this action.

²² See 151_SAFOOwensBrockway0840001.pdf in the docket for this action.

²³ See 89 FR 13622 (February 23, 2024) at page 13641.

independent four-factor analyses in themselves, “Based on the information provided in the four factor analysis, the cost information that you submitted, the additional information you provided, and the process DEQ is proposing to use to screen facilities, DEQ estimates the following controls are likely to be required at your facility . . . If you disagree with or would like to discuss DEQ’s preliminary determination as outlined in this letter, we encourage you to reach out to the DEQ now.”²⁴

Under OAR 340–223–0110(1), if a source accepted ODEQ’s preliminary determination, ODEQ could finalize the determinations in a unilateral order under OAR 340–223–0130, SAFO under OAR 340–223–0110(2)(b)(B), or other enforceable mechanism such as a permit modification.²⁵ However, since nearly all the affected facilities asserted no feasible cost-effective controls in the four-factor analyses, this initiated a process from January 2021 to August 2021 to review additional information regarding the technological feasibility and cost of controls pursuant to OAR 340–223–0120(2), to determine the controls necessary to select sources and for reasonable progress, and impose these controls either through a unilateral order or SAFO.

Each of the compliance options in OAR 340–223–0110(2) are either part of Oregon’s source selection methodology or grounded in the four-factor analysis required by OAR 340–223–0110(1) and 0120. We do not interpret OAR 340–223–0110(2) as permitting alternatives to the requirements of the CAA or Regional Haze Rule. Rather, entering into a SAFO (agreed order) is an alternative administrative mechanism to impose controls necessary for reasonable progress that would have been contained in a unilateral order.

Our review of Oregon’s Regional Haze SIP submission indicates that ODEQ continued to consider the four factors in its engagement with each of the sources after issuance of the preliminary determination letters. This is documented in appendices 1 through 6 of Oregon’s November 22, 2023, SIP supplement.²⁶ After considering the additional information regarding technological feasibility, cost of controls, energy and non-air quality impacts, and time necessary to impose the controls, ODEQ determined the appropriate administrative mechanism to impose the enforceable emission

limitations. In most cases the most efficient and effective mechanism was a SAFO issued under OAR 340–223–0120(2).

Based on our review of the administrative record, the EPA does not believe that the differences between the January 2021 preliminary control determinations and the final four-factor control determinations in the August 2021 SAFOs are a function of the enforceable mechanism used (a unilateral order under OAR 340–223–0130 versus a SAFO issued under OAR 340–223–0110(2)). Instead, as discussed in our facility-specific responses to comment, the differences appear to be a result of ODEQ’s consideration of technical feasibility and cost as documented in appendices 1–6 of the November 2023 supplement. Given that these SAFOs are outgrowths of ODEQ consideration of the four factors, rather than other factors, we disagree that additional evaluation is necessary.

5. Compliance Deadlines

Comment: “In the 2023 SIP supplement, Oregon extended the compliance deadlines for emission unit replacements (associated with alternative compliance) from July 31, 2026, to July 31, 2031. This extended deadline is well beyond the end of the current regional haze planning period and will allow current emissions from affected facilities to continue without mitigation for an additional five years. In their 2019 regional haze guidance document, the EPA states that the reasonable progress goals “for the second implementation period are to be based only on the combined effect of the LTS measures with compliance dates on or before December 31, 2028.”

Response: The citation to the EPA’s 2019 Guidance provided by the commenter deals with modeling, and notes that states cannot claim projected 2028 emissions reductions in the modeling if those control measures are not in effect by 2028.²⁷ This is not a regulatory prohibition on controls outside the implementation period. The relevant regulatory citation is 40 CFR 51.308(f)(2)(i), which requires that if a state concludes that a control measure cannot reasonably be installed and become operational until after the end of the implementation period, the state may not consider this fact in determining whether the measure is necessary to make reasonable progress. The clear implication is that controls after the end of the implementation period are allowable under the RHR if

the determinations are reasonable. An example is Oregon’s regional haze plan for the first implementation period which adopted regulatory provisions to cease coal-fired electricity generation at the Boardman facility, however implementation of the measures (closure of the coal-fired operations) would not occur until the second planning period, in 2020.²⁸ Another example is Washington’s regional haze plan for the first implementation period which required closure of the coal-fired units at the TransAlta facility, however closure of units was phased in 2020 and 2025, during the second implementation period.²⁹

With respect to Oregon’s determinations under the four factors, some pollution controls were imposed under 340–223–0110(2)(b)(B) and (C), which required installation of identified controls no later than July 31, 2026. For a subset of units, ODEQ used authority under OAR 340–223–0110(2)(b)(E), which allowed replacement of an emissions unit by no later than July 31, 2031. The comment, “[i]n the 2023 SIP supplement, Oregon extended the compliance deadlines for emission unit replacements (associated with alternative compliance) from July 31, 2026 to July 31, 2031” is a misreading of the Oregon regional haze rules. The July 31, 2026, compliance deadlines under OAR 340–223–0110(2)(b)(B) and (C) apply to retrofit options. Instead, ODEQ followed the compliance deadline in OAR 340–223–0110(2)(b)(E) which applies to emissions unit replacement. These regulatory provisions were adopted by the Oregon Environmental Quality Commission after a full public comment period from May 28, 2021, to June 30, 2021, and a hearing conducted on June 28, 2021.³⁰

We also believe that the comment, “[i]n the 2023 SIP supplement, Oregon extended the compliance deadlines for emission unit replacements (associated with alternative compliance) from July 31, 2026 to July 31, 2031” is a misreading of the record. An example is the Northwest Pipeline Baker City facility. The original SAFO, effective August 9, 2021, did not include a concrete deadline for emissions unit replacement.³¹ In response to EPA comment, as indicated in the amended SAFO, “DEQ received comments from the U.S. Environmental Protection Agency on the Regional Haze State

²⁸ See 77 FR 50611 (August 22, 2012).

²⁹ See 79 FR 33438 (June 11, 2014).

³⁰ See 702 staff report EQC meeting_072321_ItemJ_RegionalHaze.pdf.

³¹ See 146 SAFONorthwestPipelineBaker.pdf, included in the docket for this action.

²⁴ See 108_haze-BosieCascade-Medford.pdf.

²⁵ See 136_GilchristNoticeofApplicationforESPInstall20210608.pdf.

²⁶ See documents 246 through 251b included in the docket.

²⁷ See 2019 Guidance, at page 46, *Regional scale modeling of the LTS to set the RPGs for 2028*.

Implementation Plan, requiring amendments to the SAFO,” ODEQ added a concrete compliance deadline for unit replacement and submitted the amended SAFO as part of the 2023 supplement.³² In our review of the record we see no evidence to suggest ODEQ modified compliance deadlines without a clear basis under the four factors.

Lastly, with respect to ODEQ’s application of OAR 340–223–0110(2)(b)(E), this must be viewed in the context of the overall mix of timelines (most before 2028) and the other controls imposed (primarily by July 31, 2026). ODEQ evaluated 43 emissions units and a total of 62 control devices.³³ Of this universe, ODEQ determined that unit replacement may be a reasonable control option for 10 units. Given the complexity and logistical challenges of complete emissions unit replacement, we believe ODEQ’s selective use of the full compliance deadline allowable under OAR 340–223–0110(2)(b)(E) is reasonable under the four factors of CAA section 169A(g)(1) and 40 CFR 51.308(f)(2), including the time necessary for compliance.

6. Standards for Emissions Unit Replacement

Comment: “New emission units generally have lower emissions than older units. However, a wide variety of emissions are possible from new units. In several places, the Oregon SIP requires that new units “shall meet the most recent permitting standards and requirements for new emission units (including but not limited to New Source Performance Standards) in place at the time of submitting a permit application.” As the NPS shared with ODEQ during SIP supplement consultation, this may not be adequately protective because new source performance standards (NSPS) are frequently less stringent than best available control technology (BACT)-level controls or those that may be deemed reasonable through a four-factor analysis.”

Response: As a fundamental matter, the EPA disagrees that best available control technology (BACT) is an appropriate threshold for evaluating Oregon’s determinations of the controls necessary for reasonable progress for the second planning period. For a source recently permitted to BACT standards, it may be reasonable for the state to argue that these controls are equivalent to or

more stringent than controls that would be derived under the regional haze four-factor process.³⁴ However, the inverse is not true. It is not the EPA’s expectation that controls derived under the regional haze four-factor process necessarily meet the stringency level of BACT.

With respect to the comment that Oregon’s control determinations may not be adequately protective because new source performance standards (NSPS) are frequently less stringent than those that may be deemed reasonable through a four-factor analysis, we disagree. Many of the existing units that Oregon reviewed emit significantly more NO_x, carbon monoxide, and volatile organic compounds than new units meeting the emission limits in 40 CFR part 60, subpart *Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*.³⁵ Thus, replacement of these existing units with new units meeting the NSPS will result in substantial emissions reductions. Therefore, we disagree that these standards are not adequately protective.

Finally, under OAR 340–223–0110(1) all affected facilities submitted four-factor analyses. These analyses were conducted by independent consultants and/or certified professional engineers on behalf of the sources. In all instances that ultimately resulted in unit replacement, these independent consultants and/or certified professional engineers provided four-factor demonstrations that there were “no feasible cost-effective” controls. Rather than accepting these “no feasible cost-effective” control demonstrations pro forma, ODEQ used its authority under OAR 340–223–0110(2)(b)(E) to compel significant future reductions (emission unit replacement) beyond the initial four-factor analyses. The example of Northwest Pipeline, Baker City is illustrative. This facility has three natural gas-fired reciprocating engines dating from 1956 (EU1) and one engine dating from 1981 (EU2). The four-factor analysis asserted the only feasible technology was low emission combustion retrofit with calculated cost-effectiveness of \$25,850 for EU1 and \$24,243 for EU2. Considering the significant emissions reductions from replacing these old engines, we believe this is a reasonable approach to considering the four statutory factors in determining the controls necessary for reasonable progress.

7. Wauna Facility—Biomass-Fired Fluidized Bed Boiler

Comment: “The Georgia Pacific—Wauna Mill and Roseburg Forest Products—Dillard have the highest cumulative impact on NPS Class I areas. The NPS is generally satisfied with the outcome of the control determinations for these facilities. However, we note that ODEQ has not addressed the NPS recommendation to evaluate addition of low NO_x burners and flue gas recirculation to reduce NO_x emissions from the Georgia Pacific—Wauna Mill biomass-fired fluidized bed boiler which could further reduce haze-causing emissions from that facility.”

Response: The EPA reviewed Oregon’s April 2022 and November 2023 submissions and associated documents. We found citations related to the biomass-fired fluidized bed boiler at the Wauna facility. However, we found no record of a prior comment by the NPS directly related to the “NPS recommendation to evaluate addition of low NO_x burners and flue gas recirculation to reduce NO_x emissions from the Georgia Pacific—Wauna Mill biomass-fired fluidized bed boiler.” Below is a summary of the administrative record reviewed by the EPA.

On June 15, 2020, Georgia-Pacific submitted a four-factor analysis that stated, “LNB [low NO_x burners] are not feasible for GP Wauna’s Fluidized Bed Boiler. The natural gas burners are only for auxiliary use and do not drive NO_x emissions from the unit. The boiler already employs SNCR to reduce NO_x emissions from the bubbling fluidized bed.”³⁶ As part of the May 2021 FLM consultation draft process, the NPS comments focused entirely on selective catalytic reduction (SCR) cost calculations for this unit and made no mention of LNB.³⁷ In its October 29, 2021, comments NPS did state, “We recommend that ODEQ’s draft SIP more thoroughly address emissions from GP Wauna by including an analysis of emissions from the Fluidized Bed Boiler.”³⁸ However, the contents of the comments again focused exclusively on SCR costs, with no specific mention of LNB at this unit. Additional comments submitted on August 29, 2023, as part of the FLM consultation process for the November 2023 regional haze supplement, make no mention of SCR or

³² See 215_3.3.1_Attachment1.7.1_NWPipeline_Baker_01-0038-A1_SAFO.pdf, included in the docket for this action.

³³ April 29, 2022, regional haze SIP, at page 17.

³⁴ See 2019 Guidance, at page 22–23.

³⁵ Most recently updated August 10, 2022 (87 FR 48606).

³⁶ See 129_haze-GeorgiaPacific-WaunaMill-FFA.pdf, at page 2–10.

³⁷ See Chapter 6.3.4 Federal Land Manager Comments and DEQ Responses of Oregon’s April 2022 submission, at page 126.

³⁸ See 001_1.1_StaffReport_wAttachments_Attachment C.pdf, at page 15 of 58.

LNB at this specific unit.³⁹ In the absence of more concrete information, we believe it was reasonable for ODEQ to rely on the determination in the four-factor analysis that LNB was not feasible for the Fluidized Bed Boiler (FBB) because “natural gas burners are only for auxiliary use and do not drive NO_x emissions from the unit”⁴⁰ and was, therefore, not put forward by ODEQ as a potential control measure in the January 2021 “Preliminary Determination of Cost Effective Controls

for Regional Haze” letter for this facility.⁴¹ The comment does not present information that clearly refutes the determination in the four-factor analysis that LNB/FGR is not feasible for the FBB at the Wauna Mill.

8. Georgia-Pacific—Toledo LLC—Final Control Determination

Comment: “We believe that selective catalytic reduction (SCR) remains a feasible and likely more rigorous NO_x emission control option for this facility than either of the options proposed . . .

The NPS continues to recommend that ODEQ and EPA evaluate the incremental cost-effectiveness of SCR versus the proposed low NO_x burners and flue gas recirculation control option.”

Response: The June 2020 four-factor analysis prepared by ALL4 on behalf of the Georgia-Pacific Toledo facility calculated cost effectiveness for LNB with flue gas recirculation (LNB/FGR), selective non-catalytic reduction (SNCR), and SCR, as shown in table 2.⁴²

TABLE 2—COST-EFFECTIVENESS OF CONTROLS (\$/TON NO_x) GEORGIA-PACIFIC—TOLEDO LLC

Control technology	Unit	Calculated using PSEL	Calculated using 2017 actuals
LNB/FGR	EU-11 No. 4 Boiler	\$9,717	\$10,042
LNB/FGR	EU-13 No. 1 Boiler	4,769	7,083
LNB/FGR	EU-18 No. 3 Boiler	14,822	21,024
SNCR	EU-11 No. 4 Boiler	6,613	7,630
SNCR	EU-13 No. 1 Boiler	5,191	7,706
SNCR	EU-18 No. 3 Boiler	8,569	12,126
SCR	EU-11 No. 4 Boiler	11,067	12,173
SCR	EU-13 No. 1 Boiler	8,623	12,681
SCR	EU-18 No. 3 Boiler	13,579	19,057

Georgia-Pacific’s June 2020 four-factor analysis indicates that SCR may be cost-effective for the No. 1 Boiler when calculated using permitted allowable emissions (PSEs) under ODEQ’s methodology.⁴³ However, as described in Section 5 of the November 2023 regional haze supplement, Oregon found Georgia-Pacific’s April 30, 2021, follow-up four-factor analysis correspondence compelling with respect to both cost of compliance and energy and nonair quality environmental impacts of compliance.⁴⁴ Therefore, Oregon issued its final control determination to require LNB/FGR or unit replacement for all three boilers under order number 21–0005, amendment A1.⁴⁵

We believe that it was reasonable for ODEQ to appropriately weigh the “energy and nonair quality environmental impacts of compliance” as well as the cost of compliance considerations raised in the April 30, 2021, four-factor correspondence when determining the controls necessary for reasonable progress.

9. Georgia-Pacific—Toledo LLC—Emission Limit

Comment: “[I]t is unclear how the emission limit associated with compliance option 1 was derived. We suggest that a four-factor analysis or technical demonstration justifying the 0.09 lb/MMBtu emission limit for NO_x associated with the proposed control option would improve the SIP.”

Response: The emissions limit associated with compliance option 1 was discussed in the April 30, 2021, four-factor analysis correspondence, included in Appendix 4 of ODEQ’s 2023 supplement.⁴⁶ As stated in the April 30, 2021 letter, this limit was based on Georgia Pacific’s internal engineering experience and discussions with outside vendors. In our review of the four-factor analysis, the 0.09 lb/MMBtu emission limit for NO_x represents a 68% reduction for boiler 1, a 45% reduction for boiler 3, and a 68% reduction for boiler 4.⁴⁷ These reductions are generally comparable to the estimated emissions reductions in the four-factor analyses (79% for boiler 1, 47% for boiler 3, and 53% for boiler 4) which

were calculated on a tons per year basis.⁴⁸ As calculated in our supporting memo included in the docket for this action, the 0.09 lb/MMBtu emission limit for NO_x is comparable and slightly more stringent than the EPA’s emissions factors contained in AP–42:

Compilation of Air Emissions Factors from Stationary Sources for large wall-fired boilers controlled with flue gas recirculation.⁴⁹ Therefore, we believe ODEQ’s selection of the final emissions limit is adequately justified, documented, and an acceptable means of refining the estimated emission rate contained in the four-factor analysis for the purposes of characterizing the cost of compliance.⁵⁰

10. Georgia-Pacific—Toledo LLC Emissions—Unit Replacement

Comment: “Nevertheless, the NPS supports compliance option 1. Installation of low NO_x burners and flue gas recirculation will secure a 64% NO_x reduction from Georgia-Pacific—Toledo LLC during the second implementation period (2018–2028). In contrast, compliance option 2 would defer

³⁹ See 703 NPS Oregon Regional Haze SIP Supplement Consultation.pdf.

⁴⁰ See 129_haze-GeorgiaPacific-WaunaMill-FFA.pdf, at page 2–10.

⁴¹ 130_haze-GeorgiaPacificWauanMill.pdf.

⁴² See 249_3.3.2_Appendix4_Georgia.Pacific.Toledo_Correspondence.pdf., at page 349 of the PDF.

⁴³ See 132_haze-GeorgiaPacific-Toledo-FFA.pdf, at page 2–21.

⁴⁴ See 201_RH_Round2_Supplement_Final.pdf, at page 17 and 249_3.3.2_Appendix4_Georgia.Pacific.Toledo_Correspondence.pdf, at page 394 of the PDF.

⁴⁵ See 241_3.3.1_Attachment5.8_21-0005_SAFO_A1_GeorgiaPacific_Toledo (final signed).pdf.

⁴⁶ See 249_3.3.2_Appendix4_Georgia.Pacific.Toledo_Correspondence.pdf, included in the docket for this action.

⁴⁷ See 713_GP Toledo_supporting memo.pdf, included in the docket for this action.

⁴⁸ *Id.*

⁴⁹ See <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors-stationary-sources> and 711_AP42_1.4_natural_gas_combustion.pdf, included in the docket for this action.

⁵⁰ See 2019 Regional Haze Guidance at pp. 29–32.

emission reductions for an additional five years, beyond the end of the planning period.”

Response: In the April 30, 2021, response letter to ODEQ, Georgia-Pacific stated, “The GP Toledo Mill has three affected power boilers (Nos. 1, 3, and 4 Power Boilers) and needs flexibility in determining if burners will be replaced in each unit or whether one or two new boilers will be constructed to replace these three units . . . Steam supply is a significant operational consideration for any pulp and paper manufacturing facility. Each GP mill requires steam in the pulp production process as well as the papermaking process. As such, changes to steam producing assets require substantial consideration of and planning for the assets themselves as well as the entire pulp and paper manufacturing process to minimize disruptions to overall mill operations. Both mills will need sufficient time to plan the boiler projects with both internal and external engineering resources, and then implement the changes with as little interruption to mill operations as possible. Therefore, GP is requesting an extended timeframe for implementation of these boiler projects.” As noted in the 2023 supplement to the regional haze plan, ODEQ considered this correspondence in determining under CAA section 169A(g)(1) and 40 CFR 51.308(f)(2) “the time necessary for compliance” that a deadline of July 31, 2031, was appropriate should complete emission unit replacement be necessary.⁵¹

The EPA has reviewed SAFO 21–0005, the subsequent amendment effective December 5, 2022, and the associated four-factor analysis. Based on the four-factor analysis, installing LNB and flue gas recirculation based on 2017 actual emissions had cost effectiveness figures of EU 11 = \$10,042, EU 13 = \$7,083, and EU18 = \$21,024.⁵² Considering that for two of the boilers the cost effectiveness figure exceed \$10,000/ton, we believe it was reasonable for ODEQ to provide flexibility on a unit-by-unit basis in providing the two compliance options: (1) full unit replacement by 2031; or (2) installation of LNB with flue gas recirculation by 2026.

11. Cascade Pacific Pulp, LLC—Halsey Pulp Mill Power Boilers—SCR

Comment: “The Oregon SIP requires this facility to eliminate use of no. 6 fuel oil by June 30, 2024, replace power

boiler #2 with a new emissions unit that will achieve a limit of 0.036 lbs NO_x/MMBtu as a 30-day rolling average no later than July 31, 2031, and, upon replacement of power boiler #2, limit emissions from power boiler #1 to no more than 27 tons of NO_x per year . . . SCR may still be a feasible and more rigorous NO_x emission control option for the power boiler #1 than the control determination requires. In its Good Neighbor Plan, EPA recently determined that SCR is technically feasible to control NO_x emissions from natural gas-fired industrial boilers at pulp and paper mills.”

Response: On June 15, 2020, Cascade Pacific Pulp, LLC submitted a four-factor analysis prepared by the environmental consulting service ALL4 Inc.⁵³ With respect to SCR, ALL4 calculated the cost effectiveness of SCR (\$/ton NO_x reduced) on CPP Halsey power boiler #1 to be \$16,029 based on 2017 PSEL and \$38,292 based on 2017 actual emissions. ALL4 calculated the cost effectiveness for CPP Halsey power boiler #2 to be \$28,349 based on 2017 PSEL and \$204,083 based on 2017 actual emissions.⁵⁴ Using its authority under OAR 340–223–0120(3), ODEQ preliminarily adjusted the four-factor analyses using conservative inputs such as interest rate (3.25%), equipment lifetime (30 years), and potential to emit (PSEL). However, after these adjustments, ODEQ did not find SCR cost-effective at the \$10,000 threshold as evidenced by the agency’s determination to propose LNB with flue gas recirculation instead of SCR for power boiler #1 as part of the “Preliminary Determination of Cost Effective Controls” letter.⁵⁵

In our 2019 guidance, we recommend the use of recent actuals or projected actuals rather than allowable emissions (PSELs) in calculating cost-effectiveness.⁵⁶ Considering the SCR cost effectiveness at these units based on the recent actual emissions contained in the four-factor analysis (\$38,292 for power boiler #1 and \$204,083 for power boiler #2), we have no reasonable basis to dispute Oregon’s determination that SCR was not cost effective for these units.

⁵³ See 110_haze-CascadePacificPulp-HalseyMill-FFA.pdf.

⁵⁴ See 110_haze-CascadePacificPulp-HalseyMill-FFA.pdf, at page 2–21.

⁵⁵ See 111_haze-CascadePacificPulp.pdf.

⁵⁶ See 2019 Guidance, *Selection of emissions information for characterizing emissions-related factors*, at page 30 and *Use of actual emissions versus allowable emissions*, at page 17.

12. Cascade Pacific Pulp, LLC—Halsey Pulp Mill Power Boilers—LNB

Comment: “It is unclear how the future emission limit associated with the replacement of power boiler #2 was derived. We believe that a four-factor analysis or technical demonstration justifying the 0.036 lbs NO_x/MMBtu emission limit would improve the SIP.”

Response: The EPA acknowledges that ODEQ’s decision-making for the August 25, 2023, final control determination under SAFO 22–3501–A2 could have been clearer in the SIP submissions. However, ODEQ’s SIP submissions ultimately meet the requirement in 40 CFR 51.308(f)(2)(iii) to document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the state relied to determine the emission reduction measures that are necessary for reasonable progress. With respect to Cascade Pacific Pulp, LLC—Halsey Pulp Mill Power Boilers, ODEQ’s November 2023 regional haze supplement documents ODEQ’s process for its reasonable progress determination.⁵⁷ The 2023 supplement states that, on January 21, 2021, ODEQ proposed that LNB with flue gas recirculation on power boiler #1 could be cost effective and included this control as part of the “Preliminary Determination of Cost Effective Controls” letter.⁵⁸ On January 27, 2021, Cascade Pacific Pulp responded by questioning ODEQ’s cost analysis and submitting a revised cost analysis performed by ALL4 consulting service for power boiler #1.⁵⁹ On August 9, 2021, Cascade Pacific Pulp and ODEQ entered into SAFO 22–3501, establishing installation of a LNB on power boiler #1.⁶⁰ On February 1, 2022, the parties agreed to amend the order to allow the option of unit replacement for power boiler #1.⁶¹ On August 25, 2023, the parties again amended the order to allow the unit replacement of power boiler #2 instead of power boiler #1.⁶²

While ODEQ’s documentation could have been more robust, the commenter does not provide information to indicate that ODEQ’s determination was unreasonable or inadequate. ODEQ’s January 21, 2021, preliminary control determination and subsequent SAFO

⁵⁷ See 201_RH_Round2_Supplement_Final.pdf, at page 18.

⁵⁸ See 248_3.3.2_Appendix3_Cascade.Pacific.Pulp_Halsey_Correspondence.pdf at page 579 of the PDF.

⁵⁹ I.d., at page 581 of the PDF.

⁶⁰ See 112_SAFO22-3501CPPHalsey.pdf.

⁶¹ See 201_RH_Round2_Supplement_Final.pdf, at page 18.

⁶² See 243_3.3.1_Attachment6.1_22-3501_A2_SAFO_CPP_Halsey_Final_signed.pdf.

⁵¹ See 201_RH_Round2_Supplement_Final.pdf, at page 17.

⁵² See 132_haze-GeorgiaPacific-Toledo-FFA.pdf, at page 2–17.

modifications are direct outgrowths of ODEQ's review of and action upon the June 15, 2020, four-factor analysis. This four-factor analysis (as revised on January 27, 2021) asserted that LNB with flue gas recirculation was not cost-effective for power boiler #1 (\$10,559 per ton reduced based on PSEL and \$26,446 per ton reduced based on 2017 actual emissions).⁶³ To the extent that LNB with flue gas recirculation (as proposed in ODEQ's preliminary determination) may be above Oregon's \$10,000 per ton cost effectiveness threshold, as asserted by the ALL4 analysis, or may be below Oregon's \$10,000 per ton threshold with a different assumption set, the EPA does not see a compelling basis to dispute ODEQ's final control determination.

First, it is clear from our review of the administrative record that ODEQ conducted a multi-year, extensive effort to evaluate control options under the four statutory factors of CAA section 169A(g)(1).⁶⁴ Second, Oregon's \$10,000 per ton cost effectiveness threshold is one of the highest in the nation, if not the highest, applied specifically under the regional haze program. If the EPA were to conduct its own independent cost analysis, the EPA would not necessarily use a \$10,000 threshold for determining reasonable progress controls. Third, ODEQ chose a more stringent methodology than the EPA's 2019 guidance recommends in calculating cost effectiveness using allowable emissions (PSELs). Use of recent actuals or projected actuals in accordance with the 2019 guidance⁶⁵ would almost certainly result in a less stringent outcome than ODEQ's methodology. Lastly, as noted in a previous response to comment, Oregon engaged in a rigorous process to improve the accuracy of the facility submitted four-factor analyses, rather than accepting the initial conclusions pro forma. In the case of Cascade Pacific Pulp Halsey, Oregon's process resulted in significant future emissions reductions (unit replacement) well beyond the four-factor analysis submitted pursuant to OAR 340–223–0110(1) which concluded there were no feasible cost-effective controls. More details on the 0.036 lbs NO_x/MMBtu emission limit imposed by ODEQ are

discussed in section II.A.13 of this preamble.

13. Cascade Pacific Pulp, LLC—Halsey Pulp Mill Power Boilers—Compliance Deadline and Emission Limit

Comment: “The NPS supports the elimination of #6 fuel oil. However, replacing power boiler #2 on the identified schedule and requiring emission reductions from power boiler #1 following power boiler #2's replacement will defer emission reductions beyond the end of the planning period (see above for additional discussion).”

Response: In a discussion with the EPA, ODEQ explained how the agency's perspective regarding emissions unit replacement evolved through the four-factor analysis process.⁶⁶ ODEQ found that new, purpose-built units with controls like LNB built in offered superior emissions reductions compared to the limitations of retrofitting an older unit. For units like the Halsey power boilers built in 1968, this was particularly notable. ODEQ weighed the superior emissions reductions of emissions unit replacement against the additional time necessary for compliance (2031 for unit replacement versus 2023 for retrofit in the original SAFO) and determined that this was a reasonable trade-off in considering the significantly improved emissions reductions.

The EPA reviewed the four-factor analysis⁶⁷ and the emissions reductions expected to result from the LNB/FGR retrofit of power boiler #1 as required in SAFO 22–3501 as well as the emissions reductions resulting from replacement of power boiler #2 as required in SAFO 22–3501–A2. As described in our supporting memo to the docket, and based on our calculations, the LNB/FGR retrofit of power boiler #1 could potentially be expected to result in a reduction in NO_x emissions of 0.07 lb/MMBtu, while complete emission unit replacement of power boiler #2 as the primary steam production will result in a reduction in NO_x emissions of between 0.145–0.185 lb/MMBtu. Replacement of power boiler #2 will therefore result in significantly more reductions in NO_x emissions than LNB/FGR retrofit of power boiler #1. Therefore, the EPA believes this is a credible rationale and indicates that the state appropriately considered the four

factors in determining the controls necessary for reasonable progress.

14. International Paper—Springfield—Emission Limit

Comment: “According to the four-factor analysis provided in the Oregon SIP, the recent actual emission rate achieved by the International Paper—Springfield power boiler is 0.22 lb NO_x/MMBtu. Therefore, this control determination, requiring an emission limit of 0.25 lb NO_x/MMBtu, may allow an increase in emissions from the primary emission unit at the facility. The Good Neighbor Plan limits NO_x emissions from natural gas-fired boilers like the power boiler to 0.08 lb/MMBtu. The NPS recommends that EPA and ODEQ set a NO_x emission limit consistent with the Good Neighbor Plan. The current control determination for this facility lowers the allowable permitted emissions but will not actually reduce haze-causing emissions.”

Response: The EPA disagrees. The estimated recent actual emission rate is not directly comparable to the prescribed emission limit. The 0.22 lb NO_x/MMBtu emission rate cited by the commenter is described in Appendix 6 of Oregon's November 2023 supplement, “All emissions used in the 4FA Report for 2017 were previously reported in the 2017 Annual report to Lane Regional Air Protection Agency (LRAPA) with one notable exception. The Power Boiler NO_x emissions for the 4FA Report were determined by the Continuous Parameter Monitoring System Formula per Title V, permit condition 186.g. The NO_x reported in the Annual report was based upon the maximum emission factor of 0.46 lb/MMBtu. The weighted average emission factor determined from the Continuous Parameter Monitoring System Formula is 0.2195 lb/MMBtu which was used to determine the actual NO_x tons for 2017 from the Power Boiler.”⁶⁸

The EPA notes that the 0.2195 lb/MMBtu figure used in the 2017 Annual report is an annual average emission factor whereas the 0.25 lb NO_x/MMBtu emission limit is based on a 7-day rolling average.⁶⁹ Thus, ODEQ was reasonable in considering the emission rate the Power Boiler could achieve averaged over a rolling 7-day period rather than an annual period. Moreover, there are numerous variables and assumptions inherent in the formula used in the prior Title V permit to

⁶³ See 248_3.3.2_Appendix3_Cascade.Pacific.Pulp_Halsey_Correspondence.pdf, at page 581 of the pdf.

⁶⁴ See 248_3.3.2_Appendix3_Cascade.Pacific.Pulp_Halsey_Correspondence.pdf.

⁶⁵ See 2019 Guidance, Selection of emissions information for characterizing emissions-related factors, at page 30 and Use of actual emissions versus allowable emissions, at page 17.

⁶⁶ See 712_CPP_Halsey_supporting_memo.pdf, included in the docket for this action.

⁶⁷ See 110_haze-CascadePacificPulp-HalseyMill-FFA.pdf, included in the docket for this action.

⁶⁸ See 251b_Appendix6_InternationalPaper.SpringfieldMill_Correspondence.pdf, at page 4 of the PDF.

⁶⁹ See 139_SAFODEQ-LRAPA-IP.pdf.

derive the emissions factor. In particular, Condition 186.g of the prior Title V permit included two emission factor formulas: one for natural gas flow rate less than or equal to 380MSCF/Hr and one for greater than 380MSCF/Hr. Each of these formulas contains a fixed multiplier and fixed correction factor. Any variation in each of these variables would yield a different emission rate. ODEQ was reasonable in taking these circumstances into consideration when setting the emission rate the company must achieve on a 7-day average basis. The EPA disagrees with the assertion that this short-term emission limit will lead to long-term emissions increases compared to recent actuals. Moreover, ODEQ is requiring CEMS—a reliable method of monitoring and recording emissions data.⁷⁰ This data will assure compliance with the emission rate and also inform later planning periods.

With respect to the comments that ODEQ's reasonable progress determination will not reduce emissions, we note that reasonable progress has two prongs: the prevention of any future anthropogenic visibility impairment and the remedying of any existing anthropogenic visibility impairment.⁷¹ The commenter is assuming that recent actuals are necessarily determinative of projected future actuals through 2028. This is not necessarily the case. Without lower PSELs, Springfield could ramp up production and emissions. Thus, ODEQ decision to lower PSELs to align with recent actuals is consistent with the Regional Haze Rule and CAA.

Setting aside this meaningful difference in the monitoring and compliance method, the process ODEQ used to determine the controls necessary for reasonable progress for International Paper underscores the ODEQ's reasonableness. Importantly, ODEQ calculated cost thresholds based on allowable emissions (PSELs) versus recent actual emissions (2017). This decision was a driving force behind ODEQ's preliminary control determinations and enabled the state to adjust the initial four-factor analyses to ultimately determine the controls necessary for reasonable progress.

As noted in our response to comment in section II.A.11 *Cascade Pacific Pulp, LLC—Halsey Pulp Mill Power Boilers—SCR* of this preamble, Oregon's decision to calculate cost thresholds based on allowable emissions was much more stringent than the EPA's

recommendation in the 2019 guidance.⁷² For a facility like International Paper, the difference between 2017 actuals (724 tons per year NO_x)⁷³ and allowable PSEL emissions (1692 tons per year NO_x)⁷⁴ resulted in dramatic differences in the cost effectiveness of control calculations (\$ per ton of NO_x reduced) as shown in table 3 of this preamble. On January 21, 2021, ODEQ used PSEL cost effectiveness of controls to propose SCR for the power boiler in the agency's "Preliminary Determination of Cost Effective Controls" letter.⁷⁵ On February 2, 2021, International Paper objected to ODEQ using allowable PSEL emissions in determining the cost effectiveness of controls.⁷⁶ International Paper also raised this issue in its September 18, 2020, letter to ODEQ stating, "In addition, we are concerned by DEQ's misdirected focus on reducing Plant Site Emission Limits (PSEL) rather than focusing upon the impact to visibility impairment of actual emissions. Focusing on PSEL in the evaluation of cost effectiveness for controls compounds the inequity of DEQ's approach to this process compared to other Western States. The Springfield Mill's cost effectiveness for actual emission reduction is well above the previously discussed threshold of \$10,000/ton for all of the pollution control units listed by DEQ."⁷⁷

International Paper then provided a March 15, 2021, memorandum from the ALL4 environmental consulting firm providing updated costs of controls, mirroring the parameters used in ODEQ's preliminary control determination (3.25% interest rate and 30-year equipment life).⁷⁸ In the same memorandum, ALL4 recommended that International Paper request a 179 ton per year NO_x PSEL and 0.25 lb NO_x/MMBtu emissions limit for the power boiler so that the calculation of cost effectiveness based on PSEL will more closely align with cost calculations based on actual emissions, yielding cost effectiveness of controls calculated to be \$10,956 (LNB/FGR), \$10,239 (SNCR), and \$14,237 (SCR).

⁷² See 2019 Guidance, *Selection of emissions information for characterizing emissions-related factors*, at page 30 and *Use of actual emissions versus allowable emissions*, at page 17.

⁷³ See 251b Appendix6 InternationalPaper.SpringfieldMill Correspondence.pdf, at page 2 of the PDF.

⁷⁴ Id.

⁷⁵ See 138_haze-InternationalPaper.pdf.

⁷⁶ See 251b Appendix6 InternationalPaper.SpringfieldMill Correspondence.pdf, at page 573 of the PDF.

⁷⁷ Id., at page 557 of the PDF.

⁷⁸ Id., at page 576 of the PDF.

ODEQ's consideration of imposing SCR as part of the agency's preliminary control determination was only possible by using allowable emissions well above actual emissions, PSEL emissions (1692 tons per year NO_x)⁷⁹ versus actual 2017 emissions (724 tons per year NO_x).⁸⁰ In addition to the important fuel restriction requirements noted by the NPS, SAFO 208850 (effective August 9, 2021) was intended by Oregon as an anti-backsliding measure to prevent International Paper from future emissions growth during the second implementation period that may jeopardize reasonable progress.

Lastly, with respect to the commenter's recommendation that EPA and ODEQ set a NO_x emission limit consistent with the Good Neighbor Plan, we note that Oregon is not subject to the Good Neighbor Plan. This regulation was published on June 5, 2023 (88 FR 36654) to address the specific issue of human health impacts from ozone nonattainment, which has a different regulatory structure and requirements than the regional haze program. The EPA already determined that Oregon does not cause or contribute to ozone nonattainment in any other state.⁸¹ For the specific set of states subject to the Good Neighbor Plan, the rule established emission limits for a broad suite of source categories including boilers in Iron and Steel Mills and Ferroalloy Manufacturing, Metal Ore Mining, Basic Chemical Manufacturing, Petroleum and Coal Products Manufacturing, and Pulp, Paper, and Paperboard Mills.⁸² This is distinctively different than the regional haze four-factor analysis process which often focuses on source-specific factors in the evaluation. Another difference is that the emissions limit cited by the NPS applies only during the ozone season, directly for the purpose of addressing ozone nonattainment. Lastly, the Good Neighbor Plan for ozone estimated average cost-effectiveness per ton for pulp and paper facilities at \$14,134,⁸³ which is not necessarily comparable to the threshold for determining the controls necessary for reasonable progress toward natural visibility conditions. Therefore, the NPS would need to provide greater detail to

⁷⁹ Id.

⁸⁰ See 251b Appendix6 InternationalPaper.SpringfieldMill Correspondence.pdf, at page 2 of the PDF.

⁸¹ See 84 FR 22376 (May 17, 2019).

⁸² On June 27, 2024, the Supreme Court of the United States issued a stay of the rule pending review in the United States Court of Appeals for the District of Columbia Circuit *Ohio et al. v. EPA*, 603 U.S. ____ (2024), available at https://www.supremecourt.gov/opinions/23pdf/23a349_0813.pdf.

⁸³ See 88 FR 36654 (June 5, 2023), at page 36740.

⁷⁰ Id.

⁷¹ Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period, July 8, 2021, at page 8.

demonstrate the site-specific assumptions used to assert that a 0.08 lb/mmBtu limit is technically feasible and cost-effective under the four-factor regional haze analysis process,

especially in light of the information in table 3 of this preamble showing that LNB/FGR, SNCR, and SCR were only possible for preliminary cost-effectiveness consideration using

allowable 2017 PSEL emissions (1,692 tpy NO_x), well above actual 2017 emissions (724 tpy NO_x).⁸⁴

TABLE 3—COMPARISON OF COST-EFFECTIVE CONTROLS (\$/TON NO_x) INTERNATIONAL PAPER—SPRINGFIELD POWER BOILER

Control technology	June 2020 FFA (PSEL)	June 2020 FFA (2017 actual)	March 2021 memorandum (179 ton per year NO _x PSEL to align with recent actual emissions)
LNB and FGR	\$2,928	\$18,228	\$10,956
SNCR	3,483	16,103	10,239
SCR	4,606	22,924	14,237

15. Owens-Brockway Glass Container Inc.

Comment: “In this specific case, the NPS is aware that ODEQ is requiring the installation of controls outside of the regional haze process because of violations of the facility’s particulate matter and opacity limits. The ODEQ issued a construction permit in November 2022 requiring installation of a new catalytic ceramic filter pollution control system that must be installed by June 30, 2024. The system will control multiple pollutants, including particulate matter, NO_x, and SO₂. A draft title V operating permit, currently undergoing public review, would impose new PSELs that will limit the facility’s Q to 127 tons after the controls are installed, resulting in a Q/d of about 0.9 for the nearest NPS Class I area, Mount Rainier National Park in Washington . . . This control technology was also identified as reasonable based on evaluation of the four factors. The NPS agrees that installation of the ceramic filter system is reasonable and will result in meaningful reductions in haze-causing emissions. The NPS recommends EPA require incorporation of this control requirement into the regional haze SIP to ensure realization of emission reductions from control installation in this planning period.”

Response: The special case of the Owens-Brockway facility is discussed in section II.A.3 this preamble. Permit modifications to implement the human-health enforcement response are still ongoing.⁸⁵ We see no basis for disapproval or continued delay of the regional haze SIP action while Oregon completes its human health enforcement response, especially

considering the 75% emissions reductions from 2017 actuals and permanent shutdown of Furnace A imposed by ODEQ’s August 9, 2021, regional haze-specific order.⁸⁶

B. Environmental Organizations’ Comments

Complete copies of the Environmental Organizations’ comments and supporting attachments are included in the docket for this action. For readability, we arranged the responses to generally mirror the timeline of the Oregon process from site selection, review of controls, and imposition of controls.

1. Stationary Source Contribution

Comment: “We submitted public comments to Oregon’s Department of Environmental Quality (“DEQ”) on the state’s draft SIP Revision on November 1, 2021, and on October 21, 2023, raising several of the same issues with Oregon’s proposed regulation of stationary sources that collectively contribute 80% of the state’s regional haze-forming emissions.”

Response: Stationary sources do not contribute 80% of the state’s regional haze-forming emissions. The emissions inventory analysis in Chapter 2.3 of Oregon’s 2022 submission shows data from the EPA’s 2017 National Emission Inventory (NEI).⁸⁷ Fuel combustion and process emissions associated with stationary sources account for 11% and 6%, respectively, of Oregon’s PM₁₀ emissions. Fuel combustion and process emissions account for 14% and 4%, respectively, of NO_x emissions, with mobile sources accounting for 79% of NO_x emissions. Fuel combustion and process emissions account for 57% and

13% of the 2017 SO₂ emissions inventory. However, as noted by Oregon, “The 2017 SO₂ inventory is largely overwhelmed by PGE Boardman’s coal-fired power plant in Morrow County. With the closing of the plant in October 2020, those emissions have largely been eliminated, and the remainder of the emissions come from fuel combustion and prescribed fires.”⁸⁸

The Environmental Organizations cite to Oregon’s August 27, 2021, Notice of Proposed Rulemaking as the basis for the statement that stationary sources contribute 80% of the state’s regional haze-forming emissions. However, the actual wording of the Notice of Proposed Rulemaking states, “Federally enforceable emission reductions and pollution controls at Title V stationary sources that collectively contribute 80% of Oregon regional haze-forming emissions *from stationary sources*.” (Emphasis added)⁸⁹ The Environmental Organizations’ adaptation of this quote omits the important qualifier “from stationary sources.” In intent and practice, ODEQ was referring to the EPA’s draft regional haze guidance that recommended states set a source screening level such that 80% of the stationary source emissions inventory was captured. This formed the basis of Oregon’s decision to set the source screening level at a quantity over distance (Q/d) = 5. This was not a statement that stationary sources contribute 80% the state’s regional haze-forming emissions. Based on the most recent 2023 National Emissions Inventory trends data,⁹⁰ emissions categories associated with stationary sources contribute *at most* 18% of the cumulative anthropogenic PM₁₀, NO_x,

⁸⁴ April 22, 2022, regional haze SIP submission, at page 172.

⁸⁵ See <https://www.oregon.gov/deq/programs/pages/owensbrockway.aspx>.

⁸⁶ See 151_SAFOOwensBrockway0840001.pdf.

⁸⁷ See April 22, 2022, regional haze SIP, at page 22–27.

⁸⁸ See April 22, 2022, regional haze SIP, at page 24.

⁸⁹ See 024_RHSIP2021.notice.pdf, at page 3, included in the docket for this action.

⁹⁰ See <https://www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data>.

and SO₂ inventory.⁹¹ While up to 18% is still a meaningful percentage of the overall regional haze precursor inventory, there is no evidence to support the claim that stationary sources collectively contribute 80% of the state's regional haze-forming emissions.

2. Oregon's Regional Haze Rule Is Inconsistent With the CAA

Comment: The Environmental Organizations assert that Oregon's Regional Haze Rule codified at OAR Chapter 340, Division 223 is inconsistent on its face with the CAA and 40 CFR 51.308(f). The Environmental Organizations make four arguments in support of this comment: (1) neither the CAA nor RHR allow Oregon to unilaterally grant itself broad authority to establish an alternative compliance process that operates outside the Federal regional haze framework; (2) Oregon's rules would prevent the state from fulfilling its Federal Regional Haze obligations because they allow Oregon to provide a source with alternative compliance options that the state has not assessed through the four-factor analysis process; (3) Oregon's rules do not require ODEQ to document the technical basis for its alternative compliance decisions; and (4) Oregon's regional haze rule gives ODEQ the authority to reevaluate and reject controls deemed necessary for reasonable progress.

Response: For the reasons stated below, we disagree with each of these comments. Before turning to each of the Environmental Organizations' points, we note that these comments conflict with these same Organizations' prior comments on Oregon's Regional Haze Rule. Oregon's Regional Haze Rule was adopted by the Oregon Environmental Quality Commission after a full public comment period from May 28, 2021, to June 30, 2021, and a hearing conducted on June 28, 2021.⁹² Earthjustice, on behalf of the Cully Air Action Team, Earthjustice, Friends of the Columbia Gorge, Green Energy Institute, Oregon Environmental Council, National Parks Conservation Association, Neighbors for Clean Air, Northwest Environmental Defense Center, and Verde submitted comments supportive of the rulemaking stating, "We write in support of DEQ's

proposed revisions to Oregon's Regional Haze rules. The revised rules reflect a reasoned, well-grounded, and pragmatic plan for implementing the Clean Air Act's visibility requirements. They will also benefit many communities in Oregon that are disproportionately burdened by pollution from emissions of PM, SO₂, and NO_x and communities that are most vulnerable to the most harmful effects of climate change. [The Clean Air Act requires] each state's strategy must be based on an analysis of emission control measures that are necessary to make "reasonable progress" towards the goal of restoring natural visibility to Class I areas. The emissions-reducing strategies in DEQ's revised Division 223 rules are consistent with EPA requirements for round II state implementation plans. The revised rules provide a strong foundation for Oregon's long-term strategy for reducing anthropogenic pollutants that impair visibility."

Thus, the Environmental Organizations took full advantage of their opportunity to raise concerns with Oregon's Regional Haze Rule during the state public comment process. At that time, the Organizations were highly supportive of the rule and gave ODEQ the clear impression that their rule was consistent with the CAA. The Environmental Organization do not address their stark change in position in their current comments on EPA's proposal nor repudiate their prior position. This gives the impression that the Environmental Organizations are concerned with ODEQ's application of Oregon's Regional Haze Rule, rather than the rule itself. Nevertheless, we address each of the Environmental Organizations' arguments against Oregon's Regional Haze Rule.

First, we disagree that Oregon's Regional Haze Rule is disconnected from or inconsistent with the Federal Regional Haze Rule. Oregon adopted rules to implement the regional haze program at OAR Chapter 340, Division 223. The Division includes sections on source screening, four-factor analysis, options for compliance, and final orders requiring compliance. The source screening section establishes which sources are subject to Oregon's regional haze rules. Under the rule, all sources with a Title V operating permit and with a Q/d greater than or equal to 5 based on PSELs are subject to the regional haze rule. All sources subject to Oregon's regional haze rule must submit a four-factor analysis to ODEQ in accordance with OAR 340–223–0110(1) that meets the requirements of OAR 340–223–0120. The factors in OAR 340–223–0120 mirror those in the CAA

section 169A(g)(1) and 40 CFR 51.308(f)(2)(i). As discussed in section II.A of this preamble, under OAR 340–223–0120(2) and (3), ODEQ is authorized to adjust the four-factor analysis to account for inaccuracies or insufficient information, and for consistency purposes. The rule further authorizes ODEQ to determine which controls would be cost effective and the time period the controls can be implemented.

The regulations at OAR 340–223–0110 lay out the administrative mechanisms for imposing regional haze controls. Under this section and OAR 340–223–0130, ODEQ has the authority to order the source to install controls that ODEQ determines are cost effective on a timeline that ODEQ prescribes. Such orders are subject to appeal by the source. Alternatively, ODEQ may offer sources subject to the regional haze program the opportunity to enter into a SAFO. The rule provides five compliance options if ODEQ elects to enter into a SAFO: (1) lower PSELs to below Q/d equal to 5; (2) install controls identified by the source in a four factor analysis as cost effective for that source, provided ODEQ agrees that the controls will result in the greatest cost effective reductions; (3) install controls or reduce emissions that ODEQ determines, in its sole discretion, provide equivalent emissions reductions to controls that would be identified as cost effective for that source; (4) maintain controls that the source has already installed or maintain reduced emissions that ODEQ determines in its sole discretion have provided and will continue to provide equivalent reductions to controls that would be identified as cost effective for that source; and (5) replace emission unit with a new emission unit that meets the emission limits and requirements of the most recent applicable standard in place at the time of the permitting of the new emissions unit.

Conceptually, nothing in the CAA nor the Federal Regional Haze Rule requires that states promulgate a regional-haze-specific state rule at all nor the form such a rule must take if a state elects to do so. Rather, the CAA and Regional Haze Rule provide states discretion on the manner in which they implement the regional haze program so long as the state's long-term strategy includes the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress as determined based on a consideration of the four statutory factors and the state documents the technical basis for its decisions on the controls necessary for reasonable

⁹¹ See 704 Oregon NEI data.xlsx and 705 Original NEI source data.xlsx, included in the docket for this action. For the purpose of this analysis, we conservatively assumed that all fuel combustion was attributable to stationary sources, which likely overestimates the contribution from stationary sources.

⁹² See 702 staff report EQC meeting_072321_ItemJ_RegionalHaze.pdf.

progress. As we discussed in the proposal and herein, Oregon's SIP submissions demonstrate that the state has done so.

Moreover, each of the compliance options in OAR 340–223–0110(2) are either part of Oregon's source selection methodology or grounded in the four-factor analysis required by OAR 340–223–0110(1) and 0120. Throughout their comments, the Environmental Organizations reflect concerns with the term “alternative compliance” used to describe the administrative mechanism in OAR 340–223–0110(2) for ODEQ to enter into a SAFO with a source rather than a unilateral order. We do not interpret this as an alternative to the requirements of the CAA or Regional Haze Rule. Rather, entering into a SAFO is an alternative administrative mechanism to imposing controls necessary for reasonable progress. Our review of the subsections of OAR 340–223–0110(2) shows they are consistent with the CAA and Regional Haze Rule.

The option to lower PSELs is discussed at length in sections II.A and II.B.3 of this preamble. This option is part of Oregon's method for selecting sources to undergo review and is consistent with the Regional Haze Rule. Each of the options in OAR 340–223–0110(2)(b)(B)–(D) make clear that ODEQ references the four-factor analysis as the basis to determine the acceptability of those options. For the option in OAR 340–223–0110(2)(b)(E) regarding emission unit replacement, ODEQ reasonably anticipated that sources would not evaluate unit replacement as a control option in a four-factor analysis,⁹³ but that unit replacement may be more cost effective or provide significantly greater emissions reductions than certain add-on controls or emissions limitations in existing emission units. Therefore, contrary to the Environmental Organizations' contention, these compliance options are grounded in the Regional Haze Rule.

The Environmental Organizations appear to center their concerns on OAR 340–223–0110(2)(b)(C) and (D), which allow ODEQ to issue a SAFO that requires the source to install or maintain controls that achieve, in ODEQ's sole discretion, controls that provide equivalent emission reductions to controls that would be identified as cost effective for that source following the adjustment and review of the four-factor analysis. Oregon is subject to state administrative procedural requirements that require public review of the basis

for its decisions.⁹⁴ In addition, we interpret Oregon's inclusion of the phrase “in its sole discretion” in OAR 340–223–0110(2)(b)(C) and (D) as necessary to preserve the durability of its SAFOs. Under OAR 340–223–0110(2), ODEQ has discretion to offer sources the option to impose controls necessary for reasonable progress through a SAFO rather than a unilateral order. A benefit of the SAFO option is avoiding an appeal under OAR 340–223–0130. Given this, Oregon was reasonable in foreclosing the possibility of a source, after having signed a SAFO agreeing to install controls, challenging whether the agreed upon control was equivalent to the controls identified as cost effective under four-factor analysis. Finally, we do not interpret OAR 340–223–0110(2)(b) as overriding EPA's authority under CAA Section 110 to determine whether the SIP submission meets CAA requirements nor the requirement in 40 CFR 51.308(f)(2)(iii) to document the basis for its decisions. As discussed in sections II.A.1, II.A.2, II.A.4, and II.B.5 of this preamble, in practice, ODEQ included in its SIP submission all of the correspondence that formed the basis for its determinations of what controls are necessary for reasonable progress.

Second, with respect to the Environmental Organizations' argument that Oregon's regional haze rule prevents the state from fulfilling its regional haze obligations, ODEQ chose the compliance options in OAR 340–223–0110(2)(b) as the regulatory mechanism to effectuate its determinations of the controls necessary for reasonable progress based on the four factor analyses conducted under OAR 340–223–0120. As we stated in the proposed rulemaking for this action, reasonable progress analysis, including source selection, information gathering, characterization of the four statutory factors (and potentially visibility), balancing of the four factors, and selection of the emission reduction measures that represent reasonable progress, is a technically complex exercise, but also a flexible one that provides states with bounded discretion to design and implement approaches appropriate to their circumstances.⁹⁵

Accordingly, Oregon's regional haze rule requires ODEQ to make its equivalency determination based on the outcome of the four-factor analysis. Thus, we do not view Oregon's rules as

permitting ODEQ to determine the controls necessary for reasonable progress without considering the four statutory factors but rather recognizing that in practice a four-factor analysis may not always yield a single, obvious control determination. As discussed in section II.A of this preamble, in practice, ODEQ carefully considered the four factors in determining the controls necessary for reasonable progress and the appropriate regulatory mechanism under OAR 340–223–0110(2)(b).

Practically, the goal of the regional haze program is to impose enforceable emission limits, where possible expressed as a numerical emission limit.⁹⁶ Oregon's rules allow it to impose such a limit without rigidly adhering to a specific control technology. Nothing in the CAA nor regional haze rule prohibits this approach to achieving reasonable progress.

Third, regarding documentation requirements, we do not interpret OAR 340–223–0110(2)(b) as circumventing ODEQ's state administrative procedural requirements to include in its public record the basis for its regulatory decisions.⁹⁷ OAR 340–223–0120 requires ODEQ to include in its record the additional information it uses to adjust the initial four factor analysis. Moreover, Oregon is subject to the Regional Haze Rule requirement to include in its SIP submission documentation of the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the state is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects.⁹⁸ In recognition of this requirement, ODEQ supplemented its initial SIP submission with considerable documentation that informed the state's determination of the controls necessary for reasonable progress.

Finally, the EPA disagrees with the Environmental Organizations' argument that Oregon's regional haze rule allows the state to reevaluate and reject control measures deemed necessary for reasonable progress. This comment is predicated on the Environmental Organizations' incorrect interpretation of ODEQ's process for determining the controls necessary for reasonable progress. The Environmental Organizations presume that ODEQ's preliminary control determinations

⁹⁴ See *001_1.1_StaffReport_wAttachments.pdf* at p. 19; *015_4.1.1 SOS.Notice.FilingReceipt.8.27.21.pdf*; Oregon Revised Statutes sections 183.310–183.690; OAR 340–011–0009.

⁹⁵ See 89 FR 13622 at 13629 (February 23, 2004).

⁹⁶ Clarifications Memo at pp. 11–12.

⁹⁷ See OAR 340–011–0010 and 0024; See also 40 CFR 51.102.

⁹⁸ See 40 CFR 51.308(f)(2)(iii).

⁹³ 2019 Regional Haze Guidance at p. 29.

were its final control determinations. This is incorrect. See sections II.A, II.B.4, II.B.5 and II.B.6 of this preamble for EPA's interpretation and explanation of ODEQ's process.

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Clean Air Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action approves the submitted state regulations as meeting Federal requirements.

3. Oregon's Use of PSEL Reductions as a Source Selection Method

Comment: The Environmental Organizations also commented that ODEQ's application of Oregon's regional haze rule was inconsistent with the CAA and the Regional Haze Rule. The Environmental Organizations took issue with ODEQ's use of PSEL reductions stating: "DEQ used Oregon's alternative compliance process to offer facilities that screened into the Regional Haze program an option to screen back out from the program by agreeing to measures that would reduce their plant site emission limits ("PSEL") so that Q/d would be below 5.00. This resulted in only 23 of the 32 screened-in sources

completing the required four-factor analyses and allowed four of those 23 sources to belatedly screen back out from the program by reducing their PSELs so that Q/d is below 5.00."

Response: The regulatory provision cited by the Environmental Organizations is ODEQ's application of Oregon Administrative Rules (OAR) 340–223–0110(2)(b)(A) which allows a source to accept federally enforceable reductions of combined plant site emission limits (PSELs) of regional haze pollutants to bring the source's Q/d below 5. As stated in section II.B.2 of this preamble, this regulatory provision was adopted by the Oregon Environmental Quality Commission after a full public comment period from May 28, 2021, to June 30, 2021, and a hearing conducted on June 28, 2021.⁹⁹ The Environmental Organizations expressed support for Oregon's Regional Haze Rule, including the PSEL reduction option at that time. We also note that the option to limit PSELs aligns with Oregon's use of PSELs to initially select sources. Given that the state based initial source selection on PSELs (*i.e.* allowables), Oregon offered the option for sources to lower PSELs below the significance threshold to satisfy reasonable progress (prevention of future impairment) under the regional haze program.

For the following reasons, we disagree with the Environmental Organizations'

comments with respect to ODEQ's use of enforceable and permanent PSEL reductions as a means of refining source-screening or as a means of addressing reasonable progress for facilities with actual emissions below the screening threshold. As discussed in section II.A.3 of this preamble regarding similar comments submitted by the NPS, Oregon chose to use a more stringent methodology than the EPA's 2019 guidance for source screening and cost analysis based on allowable PSEL emissions rather than recent actual emissions or 2028 projected emissions.¹⁰⁰ Oregon intended this as (1) a method of initially capturing a broad selection of sources potentially impacting visibility in Class I areas and (2) as an anti-backsliding measure to ensure that facilities which had a Q/d less than 5 based on 2017 actual emissions (and would otherwise not be screened into analysis) do not have future emissions growth (based on allowable PSEL emissions) that could jeopardize reasonable progress. Pursuant to OAR 340–223–0110(2)(b)(A), Oregon entered into SAFOs to reduce allowable PSEL emissions to align with 2017 actual emissions. None of the facilities listed in table 4 would have been screened into review based on 2017 actual emissions.

TABLE 4—FACILITIES SCREENED IN USING 2017 PSEL Q/d¹⁰¹

Facility	2017 Actual Q/d	2017 PSEL Q/d	Outcome
Cascades Tissue Group: A Division of Cascades Holding US Inc.	3.02	63.72	No FFA—lowered PSEL to Q/d < 5.00.
Timber Products Co. Limited Partnership	1.63	6.07	No FFA—lowered PSEL to Q/d < 5.00.
PGE Beaver Plant/Port Westward I Plant	3.24	34.60	No FFA—lowered PSEL to Q/d < 5.00.
Roseburg Forest Products—Riddle Plywood	2.10	5.29	No FFA—lowered PSEL to Q/d < 5.00.
Roseburg Forest Products—Medford MDF	2.91	8.84	No FFA—lowered PSEL to Q/d < 5.00.
Boise Cascade Wood Products, LLC—Medford	4.19	7.02	Conducted FFA—then lowered PSEL to Q/d < 5.00.
Gas Transmission Northwest LLC—Compressor Station 12 ..	2.33	14.13	Conducted FFA—then lowered PSEL to Q/d < 5.00.
JELD—WEN	2.13	6.30	Conducted FFA—then lowered PSEL to Q/d < 5.00.
Northwest Pipeline LLC—Baker Compressor Station	4.02	14.81	Conducted FFA—then lowered PSEL to Q/d < 5.00.

The Environmental Organizations provided no compelling basis to demonstrate that aligning allowable PSEL emissions with actual emissions was a violation of regional haze requirements, especially when 2017 actual emissions are below the Q/d = 5 screening threshold.

For the two special cases where 2017 actual emissions were above Q/d = 5, Kingsford Manufacturing and Owens-

Brockway, ODEQ had a reasoned basis for imposing permanent and enforceable emissions reductions such that the source's Q/d is less than 5. In the case of Kingsford Manufacturing, the facility already had a 2019 permit modification lowering emissions below Q/d = 5 prior to the development of four-factor analyses.¹⁰² It was reasonable for ODEQ to consider this contemporaneous 2019 emissions information in updating the

agency's source screening in 2020. The case of Owen-Brockway is more complex and described in our response to comment in sections II.A.3, II.A.15, and II.B.6 of this preamble.

The Environmental Organizations focus on Boise Cascade Wood Products, LLC—Medford, Gas Transmission Northwest LLC—Compressor Station 12, JELD—WEN, and Northwest Pipeline LLC—Baker Compressor Station. These

⁹⁹ See 702_staff report EQC meeting_072321_ItemJ_regionalhaze.pdf.

¹⁰⁰ 2019 Guidance at page 17.

¹⁰¹ April 29, 2022 Oregon SIP submission, Chapter 3.7 Facility-specific findings and results.

¹⁰² See 142_haze-KingsfordManufCo.pdf included in the docket for this action.

facilities all conducted four-factor analyses under OAR 340–223–0120 and then subsequently took a PSEL limit under OAR 340–223–0110(2)(b)(A). As we stated in section II.A of this preamble, Oregon determined that controls on sources with a Q/d of less than 5 based on PSELs are not necessary to make reasonable progress in the second planning period. The Environmental Organizations do not challenge this in their comments. Indeed, this is a particularly conservative source-selection method.

Thus, Oregon was reasonable in not imposing controls based on a four-factor analysis for sources that have permanent and enforceable emissions limits such that their Q/d values are less than 5 based on PSELs.

Moreover, as shown in table 5 of this preamble, there was only one control identified in the submitted four-factor analyses that was below the \$10,000 cost per ton reduced threshold when calculated using PSEL (SCR at Gas Transmission Northwest LLC—Compressor Station 12). However, when calculated using 2017 actual emissions

or projected actual emissions, the cost per ton reduced of SCR increased to \$32,071 and \$15,386, respectively. Considering the EPA’s guidance that recommends the use of recent actuals or projected actuals in calculating cost-effectiveness, it was reasonable for ODEQ to offer the facility a PSEL reduction under OAR 340–223–0110(2)(b)(A) to align with actual emissions, especially when 2017 actual emissions at the facility were so far below the screening threshold (Q/d = 2.33).

TABLE 5—COST-EFFECTIVENESS OF CONTROLS (\$/TON NO_x REDUCED)¹⁰³

Facility	Control technology	Calculated using 2017 PSEL	Calculated using recent actuals	Calculated using projected actuals
Boise Cascade Wood Products, LLC—Medford ¹⁰⁴	SNCR	\$10,196	.....	.....
	SCR	13,373	.....	.....
Gas Transmission Northwest LLC—Compressor Station 12 ¹⁰⁵	SCR (Unit A)	6,719	32,071	15,386
	SCR (Unit B)	11,449	51,869	26,514
JELD—WEN ¹⁰⁶	SCR—urea	19,969	.....	.....
	SNCR—ammonia	18,135	.....	.....
Northwest Pipeline LLC—Baker Compressor Station ¹⁰⁷	Low emission control (EU1)	25,850	.....	.....
	Low emission control (EU2)	24,243	.....	.....

Finally, the lowering PSELs increases the likelihood that certain sources will be subject to NSR. ODEQ uses PSELs to manage emissions increases and decreases throughout the state to maintain the NAAQS and protect visibility.¹⁰⁸ Accordingly, changes to PSELs trigger Oregon’s state and Federal new source review programs.¹⁰⁹ The applicability trigger often hinges on the increase in emissions over the netting basis.¹¹⁰ The regulations also allow for deduction of certain unassigned emissions when determining whether an emission change requiring NSR occurs.¹¹¹ In several cases, ODEQ ordered the reduction of PSELs, the

zeroing out of unassigned emissions, and reduction of the netting basis.¹¹² This increases the likelihood that the source will be subject to NSR and associated control technology review in the future.

4. Oregon’s “Alternative Compliance” Pathways

Comment: The Environmental Organizations asserted generally that ODEQ’s SAFOs were not outgrowths of ODEQ’s considerations of the four-factor analysis. In the introduction portion of their comments, the Environmental Organizations asserted: “And instead of ordering all 17 facilities that completed four-factor analyses to implement the reasonable progress controls identified through those analyses, DEQ chose to offer agreements to all but one of the facilities—enabling them to evade the regional haze process. These agreements allowed sources to accept alternative emission reduction measures that will achieve far fewer reductions in haze-forming emissions than the highly effective pollution controls that DEQ originally identified in its 2021 control letters. The emission reductions measures in the agreements were not vetted through the four-factor analysis

process. DEQ entered into the agreements without analyzing, determining, or demonstrating that they would result in emissions reductions equivalent to those reductions that would have occurred had the sources been required to install the controls identified through four-factor analyses.”

Response: The Environmental Organizations argue that all changes from the January 2021 preliminary control determination letters to the final August 2021 control determinations are attributable to considerations other than regional haze. The EPA acknowledges that ODEQ’s process was challenging to follow. However, in our review of the record, we have determined that ODEQ established these agreements within the framework of the Regional Haze Rule and the four statutory factors.

Under OAR 340–223–0110(1) all affected facilities were required to submit four-factor analyses that comply with OAR 340–223–0120, which mirrors the Federal statutory requirement to consider the four statutory factors as outlined in CAA section 169A(g)(1) and 40 CFR 51.308(f)(2). Except for Owens-Brockway and Gilchrist Forest Products, twenty-one facilities provided four-factor demonstrations asserting “no feasible, cost-effective” controls were available. In issuing the January 2021 preliminary determination letters, ODEQ began the process of disputing the claims of “no feasible, cost-

¹⁰³ Under OAR 340–223–0120, ODEQ required calculation of cost-effectiveness based on PSEL. However, Gas Transmission Northwest LLC was one of several facilities to provide cost-effectiveness based on recent actuals or projected actuals. To the extent supplementary information was available for a facility, the EPA added it to our analyses and tables.

¹⁰⁴ See 107_haze-BoiseCascade-Medford-FFA.pdf in the docket for this action.

¹⁰⁵ See 122_haze-GasTransmissionNW-Station12-FFA.pdf in the docket for this action.

¹⁰⁶ See 140_haze-JELD-WEN-FFA.pdf in the docket for this action. OAR 340–223–0120 required cost calculation based on PSEL.

¹⁰⁷ See 144_haze-NorthwestPipeline-Baker-FFA.pdf in the docket for this action.

¹⁰⁸ See OAR 340–222–0010; 89 FR 22363, at page 22367 (April 1, 2024).

¹⁰⁹ See OAR 340–224–0025.

¹¹⁰ *Id.*

¹¹¹ See OAR 340–222–0055.

¹¹² See 114 SAFO05-1849CascadesTissueGroup.pdf; 141a Jeld wen permit mod_18-0006-TV-01-PM_2022_1.pdf; 151 SAFOOwensBrockway0840001.pdf; OAR 340–224–0070, 0270.

effective” controls in the four-factor analyses. As discussed in section II.A.2 of this preamble, these letters were not four-factor analyses themselves or determinations of the controls necessary for reasonable progress under OAR 340–223–120(4) or 40 CFR 51.308(f)(2). Rather, a plain reading of the letters and documentation provided by ODEQ indicates these letters were interim steps in ODEQ’s refinement of the initial four-factor analyses. Given that ODEQ invited the recipients of the letters to discuss the preliminary findings with ODEQ, ODEQ clearly anticipated further refinements to the analyses. In this context, ODEQ appropriately initiated this interim process by asserting the most stringent measures that might be possible.

Furthermore, the Environmental Organizations appear to ignore or mischaracterize the important correspondence included in appendices 1 through 6 included in both the state’s docket for the 2023 regional haze supplement and the docket for the EPA’s proposed rulemaking.¹¹³ The initial four-factor analyses, ODEQ’s refinement and preliminary letters, and this supplemental information collectively formed the basis for ODEQ’s determination of the controls necessary for reasonable progress. Each of these steps in the process and associated documentation evince ODEQ’s consideration of the four statutory factors consistent with 40 CFR 51.308(f)(2).

The Environmental Organizations argue that because ODEQ’s determination of the controls necessary for reasonable progress differed in some cases from the preliminary determinations that its final determinations could not have been based on a consideration of the four statutory factors. The EPA disagrees. As detailed in our facility-specific responses to NPS’s comments, we have reviewed the correspondence and confirmed that ODEQ considered the four factors in making final control determinations. The supplemental correspondence indicates that ODEQ focused extensively on the technological feasibility of controls, cost of controls, and the time necessary for compliance. As discussed in our responses to NPS’s comments in section II.A. of this preamble, ODEQ not choosing BACT-level controls or other controls advocated by the NPS and the Environmental Organizations does not mean that Oregon did not consider the four statutory factors. Section II.A of this preamble details our facility-

specific findings under the four factors. In each case, Oregon had a rational basis under the four factors in making final determinations.

Comment: In the analysis section of their comments, the Environmental Organizations asserted: “Neither the Clean Air Act nor Regional Haze Rule allow EPA or Oregon to reject viable controls identified through a four-factor analysis and offer sources alternative compliance measures that have not been analyzed against the four statutory factors, and which will not yield equivalent emission reductions. EPA’s proposal to approve Oregon’s alternative compliance agreements violates the principle that state determinations concerning the selection and implementation of controls necessary to meet reasonable progress requirements must be ‘reasonably moored’ to the Clean Air Act, including the four factors listed in the statute.”

Response: We agree with the general principle that a state’s reasonable progress determinations must be based on consideration of the four statutory factors. As we stated in the proposal, 40 CFR 51.308(f)(2)(i) requires states to determine the emission reduction measures for sources that are necessary for reasonable progress by considering the four statutory factors. We disagree with the implication that Oregon did not do so. As we state in response to similar comments, the Environmental Organizations’ argument rests on the premise that ODEQ’s preliminary determination letters represented the culmination of the ODEQ’s consideration of the four statutory factors and foreclosed any further consideration of those factors. This is incorrect.

ODEQ’s SIP submission makes clear that ODEQ concluded its consideration of the four factors subsequent to these letters, after the sources provided additional information regarding the availability of controls, cost of compliance, energy and non-air quality impacts of the controls, and time necessary to install the controls.¹¹⁴ The commenters do not explain how ODEQ’s consideration of the four factors prior to the preliminary determination letters is acceptable, but its consideration of the four factors after the letters is unacceptable.

Our review of the information ODEQ included in the SIP submission indicates that ODEQ’s determinations of the controls necessary for reasonable progress, particularly where its final determinations differed from its

preliminary determinations, reflect ODEQ’s careful consideration of technical feasibility and cost of controls—not an attempt to circumvent the requirements of 40 CFR 51.308(f)(2) as the commenters suggest. The EPA recognized in the proposal that reasonable progress analysis, including source selection, information gathering, characterization of the four statutory factors (and potentially visibility), balancing of the four factors, and selection of the emission reduction measures that represent reasonable progress, is a technically complex exercise, but also a flexible one that provides states with bounded discretion to design and implement approaches appropriate to their circumstances.¹¹⁵ ODEQ’s process of considering the four factors and for determining the controls necessary for reasonable progress reflect the technical challenges associated with installing retrofit controls on diverse industrial processes. For each source, the EPA is satisfied that ODEQ has done so.

Comment: The Environmental Organizations further asserted that ODEQ did not follow its own rules in entering into SAFOs. The Environmental Organizations asserted that ODEQ did not adequately determine whether the emissions reductions expected from each SAFO were equivalent to the emission reductions projected from the controls ODEQ preliminarily determined were cost effective in its letters to the sources. The Organizations stated: “But nothing in the record suggests that DEQ actually analyzed the emission reductions that would result from the alternative compliance agreements or compared them to the emission reductions that would result from installing controls identified through four-factor analyses. Many of the agreements contain several compliance options for the source that will not deliver equal emissions reductions. But rather than analyze the emissions expected from each of the compliance pathways, it appears that DEQ abandoned any effort to quantify the reductions expected from the agreements, stating in its response to comments that it did not have adequate information to allow it to determine equivalency with precision.” The Environmental Organizations further asserted that based on their own analysis, ODEQ’s SAFOs will achieve far less emission reductions than the controls ODEQ initially determined were cost effective in its preliminary control letters to sources.

¹¹³ Documents 246 through 251 of the docket.

¹¹⁴ See appendices 1–6 of Oregon’s 2023 supplement.

¹¹⁵ 89 FR 13622 at 13629 (February 23, 2004).

Response: First, the Regional Haze Rule requires that the state determine the controls necessary for reasonable progress based on a consideration of the four statutory factors. As we explained in the Proposal and herein, Oregon's submission clearly demonstrates that it considered the four statutory factors in determining the controls necessary for reasonable progress.

Second, Oregon followed its own rules in determining the controls necessary for reasonable progress. As stated above, the EPA disagrees that the preliminary control determinations represented ODEQ's final four factor analysis. Therefore, these preliminary determinations are not the correct barometer to measure whether an emission control will achieve equivalent emission reductions under OAR 340–223–0110(2)(C) or (D).

A careful review of the SIP submission indicates that ODEQ invoked OAR 340–223–0110(2)(C) once in the case of the International Paper—Springfield Mill and OAR 340–223–0110(2)(D) once in the case of Roseburg Forest Products—Dillard. We discuss at length the appropriateness of ODEQ's reasonable progress determination for the International Paper—Springfield Mill in section II.A of this preamble. As documented in appendix 6 of ODEQ's 2023 regional haze supplement, International Paper responded to ODEQ's preliminary determination in a letter dated February 2, 2021, and a supporting memorandum dated March 15, 2021.¹¹⁶ This information was cited in ODEQ's 2023 supplement as the basis for revising the preliminary determination, “On February 2, 2021, IP Springfield submitted a letter in response to DEQ's preliminary determination, explaining that the cost effectiveness of SCR installation was above the \$10,000 per ton threshold for consideration.”¹¹⁷ The Environmental Organizations provided no analysis or review of this follow-up correspondence to support the claim that ODEQ failed to “provide equivalent emissions reductions to controls that would be identified as cost effective for that source following the adjustment and review of a four-factor analysis.” SAFO 208850, effective August 9, 2021, requiring PSEL reductions, installation of CEMS, and fuel restrictions is precisely what ODEQ identified as cost effective for that source following the

adjustment and review of a four-factor analysis.

With respect to Roseburg Forest Products, ODEQ did not issue a preliminary determination letter to the source, but indicated in its SIP submission that it initially approached the source with installation of SNCR on Boilers Nos. 1–3. The SIP submission indicates that the source and ODEQ then considered whether the Boiler Nos. 1, 2 and 6 could achieve a similar emission reduction by optimizing operations of the boilers. This engagement culminated in a SAFO that imposes an emission limit of 0.27 lb. NO_x/mmBTU (7-day rolling average) for Boiler No. 1 and 0.26 lb. NO_x for Boiler Nos. 2 and 6 (7-day rolling average).¹¹⁸ The SAFO gave the facility the choice to achieve the emission limit either through installing SNCR or through boiler optimization.¹¹⁹ As discussed in section II.B.2 of this preamble, the goal of the regional haze program is to impose enforceable emission limits, where possible expressed as a numerical emission limit.¹²⁰ Oregon's rules allow it to impose such a limit without rigidly adhering to a specific control technology. Nothing in the CAA nor Regional Haze Rule prohibits such a pragmatic approach to achieving reasonable progress.

5. Documentation of Oregon's Four-Factor Analysis Process

Comment: “Additionally, the portion of Oregon's SIP Revision that EPA points to as supporting EPA's conclusion that Oregon adequately considered the four statutory factors does not contain any analysis of the alternative compliance measures. In this section of the SIP Revision, [O]DEQ merely explains that it sent sources control letters identifying cost-effective controls but later entered alternative compliance agreements without explaining its decision to include different and weaker controls in those agreements or how the agreements reflect the four statutory factors. For some sources, DEQ generally explains that the sources sent DEQ memoranda claiming that controls identified in the 2021 control letters were not technically feasible or cost-effective but DEQ does not include those letters in the SIP Revision, preventing EPA and the public from reviewing the source analyses. Nothing in the record supports a finding that Oregon analyzed these

alternative compliance measures based on the four statutory factors.”

Response: Section 5 of Oregon's 2023 regional haze supplement was added to explain changes from the January 2021 “Preliminary Determination of Cost Effective Controls for Regional Haze” letters (preliminary determinations) to the final four-factor determinations imposed by the August 2021 SAFOs. The 2023 supplement also contained appendices 1 through 6 that included the four-factor analyses submitted pursuant to OAR 340–223–0110(1), ODEQ's January 2021 “Preliminary Determination of Cost Effective Controls for Regional Haze” letters, and the correspondence from facilities in response to the preliminary determinations. As discussed in our facility-specific responses to NPS comments, our review showed that ODEQ's consideration of the correspondence in appendices 1 through 6 was grounded in the four factors in CAA section 169A(g)(1) and 40 CFR 51.308(f)(2) in making final control determinations.

Contrary to the commenters' assertions, the documentation provided in Oregon's SIP submissions provide important context for understanding the Oregon process in comparing the final control determinations imposed by the August 2021 SAFOs to the four-factor analyses submitted to pursuant to OAR 340–223–0110(1). Except for Gilchrist Forest Products and Owens-Brockway, all four-factor analyses developed by environmental consulting firms and/or professional engineers on behalf of the sources determined that no feasible, cost-effective controls were available, or that further site-specific engineering analysis would be necessary. Examples are the June 2020 four-factor analyses for the Cascade Pacific Pulp—Halsey, Georgia-Pacific—Wauna, Georgia-Pacific—Toledo, and International Paper—Springfield facilities.¹²¹ Chapter 2.3.1 *Site-Specific Factors Limiting Implementation* of the four-factor analysis states, “Currently known, site-specific factors that would limit the feasibility and increase the cost of installing additional controls include space constraints. A detailed engineering study for each of the controls evaluated in this report would be necessary before any additional controls were determined to be feasible or cost effective.”¹²² As documented in appendices 1–6 of the 2023 regional haze supplement, it was precisely these types of technical feasibility and cost

¹¹⁶ See 251b_Appendix6 InternationalPaper.SpringfieldMillCorrespondence.pdf, included in the docket for this action.

¹¹⁷ See 2023 regional haze supplement, at page 19.

¹¹⁸ See 157_SAFO20210809RFPDillard.pdf, included in the docket for this action.

¹¹⁹ *Id.*

¹²⁰ Clarifications Memo at pp. 11–12.

¹²¹ See 110_haze-CascadePacificPulp-HalseyMill-FFA.pdf in the docket for this action.

¹²² *Id.* at page 2–14.

concerns that ODEQ considered both before and after issuing the agency's preliminary determinations in determining the controls necessary for reasonable progress.¹²³

6. Owens-Brockway Glass Container Inc.

Comment: The Environmental Organizations referenced ODEQ's evaluation of the four-factor analysis and SAFO for the Owens-Brockway Glass Container facility in support of its argument that ODEQ's alternative compliance mechanisms are not reasonably moored to the four statutory factors. The Organizations stated: "In the case of Owens-Brockway, for example, describing DEQ's alternative compliance agreement simply as an 'agreed order to impose additional controls' is an especially large distortion of what Oregon did. An order that tracked the four-factor analysis for Owens-Brockway would have required the installation of ceramic catalytic filters on its furnaces that would have reduced the facility's NO_x and SO₂ emissions by 90% and PM₁₀ emissions by 99%. Community members had long been advocating for this kind of pollution control and the much-needed reductions in pollution in an already overburdened neighborhood that ceramic catalytic filters would have delivered. But rather than order Owens-Brockway to install the filters, DEQ and Owens-Brockway entered into an 'alternative compliance' agreement that consisted of reduced permit limits and a reiteration of a previous DEQ order to retire Furnace A, which DEQ had imposed on the facility earlier through an enforcement action. Because the permit limits that were reduced in the agreement had been set at a level that covered two furnaces (one of which was no longer operating), and because Owens-Brockway had already been ordered to stop operating one of the furnaces, Owens-Brockway's 'alternative compliance' agreement will not have an impact on the actual emissions from the facility."

Response: In a four-factor analysis dated June 12, 2020, Owens-Brockway Glass Container Inc. (Owens-Brockway) was one of the few facilities in Oregon determining technically feasible, cost-effective controls were available under the regional haze program.¹²⁴ On October 27, 2020, ODEQ concurred with Owens-Brockway's findings that combined control of NO_x, SO₂ and PM by catalytic ceramic filters is cost-

feasible for glass-melting furnaces A & D.¹²⁵ Subsequently, in 2021, ODEQ initiated an enforcement action at Owens-Brockway to address exceedances of the total particulate matter and opacity limits in the source's operating permit impacting human health.¹²⁶ While the enforcement action was pending, ODEQ initiated and completed its public comment process for its Regional Haze SIP (completed August 27, 2021). ODEQ elected not to impose the catalytic ceramic filter requirement through a regional haze unilateral order or SAFO because it did not want to circumvent its enforcement process for the permit exceedances. Therefore, Oregon limited the scope of the regional haze order (SAFO 26–1876) to permanently enshrine the shutdown of furnace A (which had not operated since June 8, 2020) and lower the PSEL to capture this reduction in emissions.¹²⁷ The lowered PSELs resulted in a Q/d of less than 5.0, below Oregon's regional haze rule applicability threshold.

Ultimately, ODEQ's enforcement action resulted in order AQ/V–NWR–2020–208 (effective October 22, 2021) which required Owens-Brockway to either shutdown furnace D or install catalytic ceramic filtration on furnace D.¹²⁸ The Environmental Organizations downplay the significance of the enforcement response and ongoing permit modification to impose catalytic ceramic filtration on furnace D.¹²⁹ Given the circumstances, ODEQ was reasonable in calibrating its regional haze SAFO to reduce PSELs, while deferring the human-health driven relief to its enforcement response. ODEQ's prudence is evidenced by the fact that it achieved both PSEL reductions and the installation of catalytic ceramic filters on furnace D by leveraging both authorities.

7. Reasonable Progress Goals

Comment: "EPA wrongfully proposes to find that Oregon's SIP Revision satisfies the Regional Haze Rule's requirements for reasonable progress

goals. In its proposal, EPA acknowledges that Oregon's reasonable progress goals are based on "modeling which represents regulations on the books as of 2020 plus stationary source controls recommended from DEQ's review of the four-factor analyses submittals." This confirms that the reasonable progress goals are based on Oregon's 2021 control letters, not the weaker controls in the alternative compliance agreements that were ultimately incorporated into the long-term strategy. EPA therefore cannot claim that Oregon satisfied the reasonable progress goal requirements. As discussed above and in our comments submitted to DEQ, the alternative compliance agreements will achieve far fewer reductions in visibility-impairing pollution than the controls identified in the 2021 control letters. As a result, Oregon's reasonable progress goals are not reflective of the visibility improvements that the long-term strategy controls will achieve, in violation of the Regional Haze Rule."

Response: We disagree with this comment. Oregon's reasonable progress goals meet the requirements of 40 CFR 51.308(f)(3). We note initially that Oregon has made significant progress reducing regional haze, as shown in table 6 of this preamble. In section IV.F of our proposed rulemaking we addressed the reasonable progress goals (RPG). We described the major factors that will continue to reduce regional haze precursor emissions during the 2018–2028 implementation period. We highlighted Oregon's mobile source regulations, because mobile sources account for approximately 80% of the statewide NO_x emissions inventory.¹³⁰ We also highlighted the impact of international marine shipping and how these emissions (SO₂) are projected to decrease by 77% due to new standards for international marine shipping fuels which became effective in 2020.¹³¹ With respect to stationary sources we acknowledged the significant SO₂ reductions from the closure of Boardman facility (the only coal-fired electric generating unit in the state).

Like other western states, Oregon used modeling from the Western Regional Air Partnership (WRAP) to conduct RPG modeling. This included 'Future Year 2028 with On the Books Controls' which forecasted expected reductions from the Boardman facility

¹²⁵ See 150_haze-Owens-Brockway.pdf, included in the docket for this action.

¹²⁶ See <https://www.oregon.gov/deq/programs/pages/owensbrockway.aspx>.

¹²⁷ See 151_SAFOwensBrockway0840001.pdf, included in the docket for this action.

¹²⁸ See 701_OwensBrockway2020-208MAO.pdf, included in the docket for this action.

¹²⁹ "Current status: In April and May 2023, DEQ held a public comment period and public hearing for Owens-Brockway's draft Title V air quality permit. Following comments from EPA, DEQ is in the process of revising this permit and will hold another public comment period in the first quarter of 2024." Source: <https://www.oregon.gov/deq/programs/pages/owensbrockway.aspx>.

¹²³ See document numbers 246 to 251 in the docket for this action.

¹²⁴ See 149_haze-Owens-Brockway-FFA.pdf, included in the docket for this action.

¹³⁰ See 89 FR 13622 (February 23, 2024) at page 13646.

¹³¹ See International Marine Organization. 2020. A Breath of Fresh Air. <https://www.wcdn.imo.org/localresources/en/MediaCentre/HotTopics/Documents/Sulphur%202020%20infographic%202%20page.pdf>.

as well as anticipated mobile source reductions. The WRAP also modeled “Future Year 2028 with Potential Additional Controls.” Due to time constraints in analyzing and assessing final four-factor determinations, these RPG calculations were based on ODEQ’s January 2021 preliminary determinations. However, as noted in our proposed rulemaking we explained that in considering the dominance of the mobile source and international marine shipping emissions source categories on the overall inventory, it is unlikely that differences in the stationary source controls selected by Oregon would

significantly impact the projected RPG modeling for the monitoring stations associated with the respective Class I areas.¹³² This is borne out by the data in table 6, drawn from publicly available information.¹³³ The average difference between the “Future Year 2028 with On the Books Controls” and the “Future Year 2028 with Potential Additional Controls” RPG projections is 0.03 deciview for the six Oregon regional haze monitoring sites. The claim that RPGs will be significantly divergent because of the difference between the January 2021 preliminary determinations and the August 2021

final four-factor determinations does not consider the overall emission source mix, particularly for NOx which is dominated by mobile source emissions that are driving the significant reductions predicted between 2018 and 2028 (approximately 80% of the 2017 inventory). Therefore, we do not believe there is adequate basis to disapprove Oregon’s use of the January 2021 preliminary determinations in projecting RPG because the August 2021 final determinations were not yet available when WRAP conducted its modeling.

TABLE 6—REASONABLE PROGRESS GOALS (IN DECIVIEWS)

Class I area	Baseline 2000–2004	Current conditions 2014–2018	WRAP 2028 on the books	WRAP 2028 on the books plus additional controls	Unadjusted 2028 glidepath 20% most impaired days
Mt. Hood Wilderness Area	12.10	9.27	8.49	8.44	9.90
Mt. Jefferson, Mt. Washington, and Three Sisters Wilderness Areas	12.80	11.28	10.73	10.70	10.60
Crater Lake National Park; Diamond Peak, Mountain Lakes, and Gearhart Mountain Wilderness Areas	9.36	7.98	7.62	7.60	7.70
Kalmiopsis Wilderness Area	13.34	11.97	11.43	11.40	11.13
Strawberry Mountain and Eagle Cap Wilderness Areas	14.53	11.19	10.36	10.35	11.35
Hells Canyon Wilderness Area	16.51	12.33	11.25	11.19	12.53

8. Robust Demonstration Requirements

Comment: “EPA’s claim that Oregon satisfied the “robust demonstration” requirement is also incorrect. EPA explains that the reasonable progress goals for eight of Oregon’s 12 Class I areas are projected to be above their 2028 unadjusted uniform rate of progress glidepath, triggering the Regional Haze Rule’s “robust demonstration” requirement. EPA’s conclusion that Oregon satisfied this requirement for the same flawed reasons it satisfied its long-term strategy requirements fails for two reasons. First, because Oregon’s reasonable progress goals are based on incorrect assumptions about the emissions-reducing control measures that screened-in sources would install, the reasonable progress goals for these Class I areas are likely even further above the 2028 uniform rate of progress than the SIP Revision reflects. And there is nothing in the record to demonstrate that the alternative compliance measures Oregon offered to sources would provide emission reductions that

are equivalent to the controls identified in the 2021 letters.

Second, there are readily available, feasible, and cost-effective controls for multiple sources that Oregon failed to include in the SIP Revision as necessary to make reasonable progress—namely, those identified in the 2021 control letters that were not included in the alternative compliance agreements. As long as there are other feasible and cost-effective controls available that are not included in the SIP Revision, Oregon cannot satisfy its robust demonstration requirement.”

Response: We disagree with this comment. According to WRAP modeling data¹³⁴ analyzed by the EPA, 4 of the 6 Oregon regional haze monitoring sites have “Future Year 2028 with On the Books Controls” with projections below the 2028 uniform rate of progress as shown in table 6.¹³⁵ These are the emissions reductions that are already predicted to occur, primarily due to the closure of the Boardman facility and Oregon’s aggressive mobile source regulations. These projections do not include the controls listed in

Oregon’s January 2021 “Preliminary Determination of Cost Effective Controls for Regional Haze” letters. The two remaining monitors, THSI (representing Mt. Jefferson, Mt. Washington, and Three Sisters Wilderness Areas) and KALM (representing the Kalmiopsis Wilderness Area), have “Future Year 2028 with On the Books Controls” projections marginally above the 2028 unadjusted glidepath but well below the EPA’s 2028 default adjusted glidepath to account for international emissions.¹³⁶

As noted by the Environmental Organizations, Oregon chose not to adjust the glidepath to account for international contribution. However, as we discussed in the proposal, it is reasonable for the EPA to consider our own modeling information in evaluating the Oregon SIP. The EPA’s modeling data appears to corroborate Oregon’s assessment that these monitors are significantly impacted by ammonium sulfate from international marine shipping.¹³⁷ This assessment is further corroborated by the EPA’s review of Chapter 2.4 *Pollutant Components of Visibility Impairment*, of Oregon’s 2022

¹³² See 89 FR 13622 (February 23, 2024) at page 13646.

¹³³ See <https://views.cira.colostate.edu/tssv2/>. Note: EPA used the WRAP preset “2028OTBa2 EPA w/o Fire Projection—MID” for on the books measures and “PAC2 EPA w/o Fire Projection—MID” for the on the books plus additional measures

calculation, which differs slightly from the RPGs reported by Oregon and listed in our proposed rulemaking.

¹³⁴ See <https://views.cira.colostate.edu/tssv2/>.

¹³⁵ See 708_OR_RPG_Chart_Data.xlsx included in the docket for this action.

¹³⁶ Availability of Modeling Data and Associated Technical Support Document for the EPA’s Updated 2028 Visibility Air Quality Modeling, September 2019.

¹³⁷ See April 22, 2022 Oregon regional haze SIP at page 17.

SIP submission. These graphs highlight the stark difference in ammonium sulfate contribution between regional haze monitors in eastern Oregon compared to southern coastal and central Oregon monitors more likely to be impacted by international marine shipping. The only stationary source with significant SO₂ emissions was the now closed Boardman facility; however, this facility was located far to the northeast and is unlikely to have impacted the two affected monitors along the southeastern Oregon coast and central cascades region. This lends further credence to Oregon's determination that these monitors were impacted by international marine shipping.

EPA included this data assessment in the proposal. The commenters did not demonstrate that EPA's assessment of the data is flawed. Rather, the commenters assume without supporting data the RPGs ought to be higher because Oregon's long-term strategy (LTS) does not include all the controls initially included in the model used to set the RPGs. However, the EPA's assessment refutes this assumption. On-the-books controls and international shipping are the dominant drivers for Oregon's reasonable progress goals. Given this, Oregon's RPGs reflect the visibility conditions that are projected to be achieved by the end of 2028 as required by 40 CFR 51.308(f)(2).

With respect to the Environmental Organizations' broader statement that Oregon did not meet the robust demonstration requirements because "other feasible and cost-effective controls available that are not included in the SIP Revision," we disagree. Attachment A of the Environmental Organizations' comments includes a comparison of the proposed controls in ODEQ's January 2021 "Preliminary Determination of Cost Effective Controls for Regional Haze" letters to the final control determinations as proof that feasible cost-effective controls were available. We do not agree with this argument for two reasons.

First, as described in sections II.B.4 and II.B.5 of this preamble, the preliminary control determination letters are not four-factor analyses. The four-factor analyses are the documents submitted pursuant to OAR 340–223–0110(1) which ODEQ reviewed and analyzed under OAR 340–223–0120, both before and after January 2021 in making final four-factor determinations. Second, and more importantly, in section 5 of Oregon's 2023 supplement, ODEQ provided a summary of the rationale the agency used in making final control determinations based on

ODEQ's review the four-factor analyses and all relevant correspondence with the facilities regarding the four-factor analyses (appendices 1 through 6). This information was added to the 2023 supplement specifically to address concerns voiced by NPS and Environmental Organizations that the 2022 regional haze SIP did not contain adequate information to explain the difference between the preliminary determinations and ODEQ's final control determinations. Neither the Environmental Organizations' comments, nor the attachments, cite to, reference, or analyze this critical information. Therefore, we do not see a basis to claim that other feasible and cost-effective controls were available when there is no record to suggest the Environmental Organizations considered the correspondence regarding the final four-factor determinations.

9. Environmental Justice

Comment: The Environmental Organizations submitted lengthy comments regarding environmental justice, which are available in the docket for this action. In summary, the Environmental Organizations commented that (1) EPA is required under Executive Orders and EPA's own commitments to consider environmental justice and (2) EPA ignores the environmental justice impacts of Oregon's Regional Haze SIPs.

Response: The regional haze statutory provisions do not explicitly address considerations of environmental justice, and neither do the regulatory requirements of the second planning period in 40 CFR 51.308(f), (g), and (i). However, the lack of explicit direction does not preclude the State from addressing EJ in the State's SIP submission. As explained in "EPA Legal Tools to Advance Environmental Justice,"¹³⁸ the CAA provides states with the discretion to consider environmental justice in developing rules and measures related to regional haze.

In this instance Oregon included an entire chapter, 3.6.1 *Environmental Justice Analysis*, "[t]o better understand the potential co-benefits of pollutant controls, DEQ undertook an environmental justice analysis of communities surrounding the facilities that DEQ's Regional Haze decisions will

affect."¹³⁹ This chapter provided additional information from EJ Screen to calculate a "Vulnerable Populations Score" and a "Environmental Justice Score Methodology for Oregon" which helped inform the overall weight of evidence approach which led ODEQ to conclude, "that controls are both environmentally beneficial and cost effective at many facilities evaluated by DEQ."¹⁴⁰

III. Final Action

For the reasons stated in our proposed action (89 FR 13622, February 23, 2024) and in section II. of this preamble, we are approving the Oregon SIP revision submitted on April 29, 2022, as supplemented on November 22, 2023, as satisfying the regional haze requirements for the second implementation period contained in 40 CFR 51.308.

The EPA is approving and incorporating by reference in 40 CFR 52.1970(c), *Table 2—EPA Approved Oregon Administrative Rules (OAR)* the following updates to Division 223 *Regional Haze Rules*, state effective July 26, 2021:

- 340–223–0010 *Purpose*, for maintaining reasonable progress and other requirements associated with Oregon's implementation of the Federal Regional Haze Rule;
- 340–223–0020 *Definitions*, updating this section to account for revised program requirements between the first regional haze implementation period and the second implementation period;
- 340–223–0100 *Screening Methodology for Sources for Round II of Regional Haze*, establishing the criteria for selecting sources for review under the regional haze program;
- 340–223–0110 *Options for Compliance with Round II of Regional Haze*, establishing requirements for sources and compliance options under the regional haze program;
- 340–223–0120 *Four Factor Analysis*, establishing the requirements for assessing potential controls for reasonable progress under the regional haze program; and
- 340–223–0130 *Final Orders Ordering Compliance with Round II of Regional Haze*, establishing ODEQ's unilateral order authority and procedures for contested case hearings under the regional haze program.

We are removing from incorporation by reference in 40 CFR 52.1970(c), *Table 2—EPA Approved Oregon*

¹³⁸ See EPA Legal Tools to Advance Environmental Justice, May 2022, available at www.epa.gov/system/files/documents/2022-05/EJ%20Legal%20Tools%20May%202022%20FINAL.pdf at 35–36.

¹³⁹ April 2022 Regional Haze SIP submission, pages 50–56.

¹⁴⁰ *Id.*, at page 57.

Administrative Rules (OAR) the outdated provisions from the first regional haze implementation period contained in sections 340–223–0030, 340–223–0040, 340–223–0050, and 340–223–0080, state-effective December 10, 2010, because the site-specific requirements contained in those revoked sections are no longer relevant.

In addition to the regulatory provisions, the EPA is approving and incorporating by reference in 40 CFR 52.1970(d), *EPA Approved Oregon Source-Specific Requirements* the following source-specific requirements as part of Oregon's long-term strategy for regional haze:

- Ash Grove Cement Company, Permit No. 01–0029–TV–01, state effective October 16, 2020, permit conditions (3), (9) through (11), (14), (16) through (28), (42), (45) through (76), (84) through (97), (99), (100), and (102) only.
- Biomass One, L.P., Order No. 15–0159, state effective August 9, 2021.
- Boise Cascade Wood Products, LLC—Elgin Complex, Order No. 31–0006, state effective August 12, 2021.
- Boise Cascade Wood Products, LLC—Elgin Complex, Permit No. 31–0006–TV–01, state effective December 5, 2016, permit condition (56), (59) through (75), (77), and (78) only.
- Boise Cascade Wood Products, LLC—Medford, Order No. 15–0004, state effective August 9, 2021.
- Boise Cascade Wood Products, LLC—Medford, Permit No. 15–0004–TV–01, state effective February 20, 2020, permit conditions (71), (72), and (74) through (88) only.
- Cascade Pacific Pulp, LLC—Halsey Pulp Mill, Order No. 22–3501–A2, state effective August 25, 2023.
- Cascades Tissue Group: A Division of Cascades Holding US Inc., Order No. 05–1849, state effective August 18, 2021.
- Cascades Tissue Group: A Division of Cascades Holding US Inc., Permit No. 05–1849–TV–01, state effective April 6, 2018, permit conditions (24), (25), (27), and (29) through (43) only.
- Collins Products, L.L.C., Permit No. 18–0013–TV–01, state effective January 26, 2015, permit conditions (3), (14) through (16), (19) through (24), (34) through (42), (63) through (75), and (77) only.
- Columbia Forest Products, Inc., Permit No. 18–0014–TV–01, state effective September 26, 2017, permit conditions (3), (8) through (20), (22), (23), (34) through (52), (58) through (66), (67—introductory paragraph), (67.a), (67.b.iii) through (67.b.v), and (68) through (70).
- EVRAZ Inc, Order No. 26–1865, state effective August 9, 2021.
- Gas Transmission Northwest LLC—Compressor Station 12, Order No. 09–0084, state effective August 9, 2021.
- Gas Transmission Northwest LLC—Compressor Station 12, Permit No. 09–0084–TV–01, state effective August 10, 2017, permit conditions (32) through (34) and (37) through (50) only.
- Gas Transmission Northwest LLC—Compressor Station 13, Order No. OAH CASE NO. 2021–ABC–04835/DEQ CASE NO. AQ/RH–HQ–2021–140, state effective June 1, 2022.
- Gas Transmission Northwest LLC—Compressor Station 13, Permit No. 18–0096–TV–01, state effective July 11, 2018, permit conditions (24) through (26), (32) through (35), and (37) through (44) only.
- Georgia-Pacific—Toledo LLC, Order No. 21–0005, Amendment No. 21–005–A1, state effective December 5, 2022.
- Georgia Pacific—Wauna Mill, Order No. 04–0004, Amendment No. 04–004–A1, state effective December 5, 2022.
- Gilchrist Forest Products, Permit No. 18–0005–TV–01, state effective July 25, 2023, permit conditions (4), (5), (9), (10), (12) through (19), (41) through (43), (45) through (59), and (61) only.
- International Paper—Springfield, Order No. 208850, state August 9, 2021.
- International Paper—Springfield, Permit No. 208850, state effective October 4, 2016, permit conditions (186) through (189), (192), and (198) only.
- JELD–WEN, Permit No. 18–0006–TV–01, state effective December 01, 2021, permit conditions (55) through (77) and (80) through (87) only.
- JELD–WEN, Permit No. 18–0006–TV–01, Addendum No. 1, state effective 8/11/2022, permit conditions 53 and 53b only.
- Kingsford Manufacturing Company, Permit No. 204402, addendum No. 2, state effective November 15, 2021, permit conditions (71) through (73) and (75) through (91) only.
- Klamath Energy LLC—Klamath Cogeneration, Permit No. 18–0003–TV–01, state effective June 12, 2017, permit conditions (10) through (16), (18), (24) through (28), (32) through (37), (39) through (49), (51), (52), and (54), and (56) only.
- Klamath Energy LLC—Klamath Cogeneration, Permit No. 18–0003–TV–01, Addendum No. 1, state effective December 8, 2020, permit conditions (3.a), (3.b), (61.i), and (66.b.xii).
- Northwest Pipeline LLC—Baker Compressor Station, Order No. 01–0038, amendment 01–0038–A1, state effective February 1, 2022.
- Northwest Pipeline LLC—Baker Compressor Station, Permit No. 01–0038–TV–01, state effective January 12, 2017, permit conditions (27) through (30) and (32) through (43) only.
- Northwest Pipeline LLC—Oregon City Compressor Station, Order No. 03–2729, amendment 03–2729–A1, state effective February 1, 2022.
- Northwest Pipeline LLC—Oregon City Compressor Station, Permit No. 03–2729–TV–01, state effective February 19, 2013, permit conditions (7), (19), (25) through (27), (38), (41), (45), and (50) through (65).
- Ochoco Lumber Company, Permit No. 12–0032–ST–01, state effective June 25, 2019, permit conditions (1.1) through (1.3), (1.6), (2.1) through (2.5), (4.1) through (4.4), and (5.1) through (6.2).
- Owens-Brockway Glass Container Inc., Order No. 26–1876, state effective 8/9/2021.
- Owens-Brockway Glass Container Inc., Permit No. 26–1876–TV–01, state effective December 10, 2019, permit conditions (33) through (48) only.
- Pacific Wood Laminates, Inc., Permit No. 08–0003–TV–01, state effective December 30, 2019, permit conditions (3), (9), (10), (12) through (19), (26) through (41), (56) through (71), and (73) only.
- PGE Beaver Plant/Port Westward I Plant, Order No. 05–2606, state effective August 10, 2021.
- PGE Beaver Plant/Port Westward I Plant, Permit No. 05–2520, state effective January 21, 2009, permit conditions (62) through (66), (68) through (78), (79.a), (80) through (83), (85), (87), (88.a), (89.d), (89.f), and (89.i) only.
- Roseburg Forest Products—Dillard, Order No. 10–0025, state effective August 9, 2021.
- Roseburg Forest Products—Medford MDF, Permit No. 15–0073–TV–01, state effective August 18, 2022, permit conditions (44) through (46), (48) through (61), (63), and (64) only.
- Roseburg Forest Products—Riddle Plywood, Permit No. 10–0078–TV–01, state effective July 31, 2019, permit conditions (65), (66), (68) through (81) only.
- Swanson Group Mfg. LLC, Permit No. 10–0045–TV–01, state effective June 12, 2017, permit conditions (4), (10) through (24), (25—introductory paragraph), (25.a) through (25.c), (27) through (40), (50) through (64), and (66) only.
- Timber Products Co. Limited Partnership, Permit No. 15–0025–TV–01, state effective June 23, 2022, permit conditions (70) through (72) and (74) through (90) only.

- Willamette Falls Paper Company, Order No. 03–2145, state effective August 9, 2021.
- Willamette Falls Paper Company, Permit No. 03–2145–TV–01, state effective February 24, 2016, permit conditions (40) through (55) only.
- Woodgrain Millwork LLC—Particleboard, Permit No. 31–0002–TV–01, state effective May 24, 2021, permit conditions (3), (12) through (21), (22—introductory paragraph), (22.a), (22.e), (22.f), (23), (25) through (28), (30) through (35), (37), (39) through (41), (43), (44), (46), (48), (49), (51) through (72), (80) through (94), and (96) only.

IV. Incorporation by Reference

In this document, the EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, we are finalizing the incorporation by reference of the Oregon regulatory and source-specific provisions described in section III. of this preamble and set forth in the amendments to 40 CFR part 52 in this document. The EPA has made, and will continue to make, these materials generally available through <https://www.regulations.gov> and at the EPA Region 10 Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information). Therefore, these materials have been approved by the EPA for inclusion in the SIP, have been incorporated by reference by the EPA into that plan, are fully federally enforceable under sections 110 and 113 of the Clean Air Act as of the effective date of the final rule of the EPA's approval, and will be incorporated by reference in the next update to the SIP compilation.¹⁴¹

Also in this document, the EPA is removing regulatory text from incorporated by reference, as described in section III. of this preamble.

V. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Clean Air Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 14094 (88 FR 21879, April 11, 2023);
 - Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
 - Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
 - Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
 - Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
 - Is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it approves a state program;
 - Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001); and
 - Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act.
- Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, February 16, 1994) directs Federal agencies to identify and address “disproportionately high and adverse human health or environmental effects” of their actions on communities with environmental justice (EJ) concerns to the greatest extent practicable and permitted by law. The EPA defines EJ as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” The EPA further defines the term fair treatment to mean that “no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.” The Oregon Department of Environmental Quality did evaluate environmental justice considerations as part of its SIP submittal; the CAA and applicable implementing regulations neither prohibit nor require such an

evaluation. The EPA did not perform an EJ analysis and did not consider EJ in this action. Consideration of EJ is not required as part of this action, and there is no information in the record inconsistent with the stated goal of Executive Order 12898 of achieving environmental justice for communities with EJ concerns.

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those areas of Indian country, the rule does not have Tribal implications and it will not impose substantial direct costs on Tribal governments or preempt Tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

This action is subject to the Congressional Review Act, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by December 9, 2024. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. See section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: September 26, 2024.

Casey Sixkiller,

Regional Administrator, Region 10.

For the reasons set forth in the preamble, EPA amends 40 CFR part 52 as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

- 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

¹⁴¹ 62 FR 27968 (May 22, 1997).

Subpart MM—Oregon

■ 2. In § 52.1970:

- a. Amend paragraph (c) table 2 by revising the entries under the heading “Division 223—Regional Haze Rules”;
- b. Revise and republish paragraph (d); and

■ c. Amend paragraph (e) table 5 under the heading “Section 5—Control Strategies for Attainment and Nonattainment Areas” by adding an entry for “Oregon Regional Haze State Implementation Plan Revision for the Second Planning Period (2018–2028)”

immediately after the entry for “Regional Haze Progress Report.”

The revisions and additions read as follows:

§ 52.1970 Identification of plan.

* * * * *

(c) * * *

TABLE 2—EPA-APPROVED OREGON ADMINISTRATIVE RULES (OAR) ¹

State citation	Title/subject	State effective date	EPA approval date	Explanations
*	*	*	*	*
Division 223—Regional Haze Rules				
223–0010	Purpose	7/26/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
223–0020	Definitions	7/26/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
223–0100	Screening Methodology for Sources for Round II of Regional Haze.	7/26/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
223–0110	Options for Compliance with Round II of Regional Haze.	7/26/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
223–0120	Four Factor Analysis	7/26/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
223–0130	Final Orders Ordering Compliance with Round II of Regional Haze.	7/26/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
*	*	*	*	*

* * * *

(d) EPA approved state source-specific requirements.

EPA APPROVED OREGON SOURCE-SPECIFIC REQUIREMENTS ¹

Name of source	Permit or order number	State effective date	EPA approval date	Explanations
Industrial Laundry & Dry Cleaners.	26–3025	12/9/1980	8/27/1981, 46 FR 43142 ...	Air Contaminant Discharge Permit.
VANPLY, Inc. & Spalding Pulp & Paper Co.	Stipulation and Consent Final Order.	12/30/1980	8/27/1981, 46 FR 43142 ...	Transfer by VANPLY, INC. of a VOC Offset to Spalding Pulp & Paper Co.
Spaulding Pulp and Paper Co.	36–6041	12/11/1980	8/27/1981, 46 FR 43142 ...	Air Contaminant Discharge Permit—Addendum No. 1.
Weyerhaeuser Company—Bly, Oregon.	18–0037	2/3/1981	11/6/1981, 46 FR 55101 ...	Air Contaminant Discharge Permit—Conditions 5 and 6.
Intel Corporation	34–2681	9/24/1993 (State effective date of Title V Program).	7/18/1996, 61 FR 37393 ...	Oregon Title-V Operating Permit—Page 11.
Cascade General (Port of Portland).	26–3224	10/4/1995	3/7/1997, 62 FR 10455	Air Contaminant Discharge Permit—Condition 19 of Addendum 2.
White Consolidated Inc	34–2060	8/1/1995	3/7/1997, 62 FR 10455	Air Contaminant Discharge Permit—Conditions 11,12 and 13 in Addendum No. 2.
PCC Structurals, Inc	26–1867	4/4/1997	6/20/1997, 62 FR 33548 ...	Air Contaminant Discharge Permit—Conditions 19, 20 and 21 in Addendum No. 2.
Dura Industries	26–3112	9/14/1995	3/31/1998, 63 FR 15293 ...	Air Contaminant Discharge Permit.
Ostrander Construction Company Fremont Sawmill.	ACDP No. 19–0002	4/29/1998	9/21/1999, 64 FR 51051 ...	Air Contaminant Discharge Permit.

EPA APPROVED OREGON SOURCE-SPECIFIC REQUIREMENTS ¹—Continued

Name of source	Permit or order number	State effective date	EPA approval date	Explanations
Ash Grove Cement Company.	Permit No. 01–0029–TV–01.	10/16/2020	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (3), (9) through (11), (14), (16) through (28), (42), (45) through (76), (84) through (97), (99), (100), and (102) only.
Biomass One, L.P	Order No. 15–0159	8/9/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Boise Cascade Wood Products, LLC—Elgin Complex.	Order No. 31–0006	8/12/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Boise Cascade Wood Products, LLC—Elgin Complex.	Permit No. 31–0006–TV–01.	12/5/2016	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit condition (56), (59) through (75), (77), and (78) only.
Boise Cascade Wood Products, LLC—Medford.	Order No. 15–0004	8/9/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Boise Cascade Wood Products, LLC—Medford.	Permit No. 15–0004–TV–01.	2/20/2020	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (71), (72), and (74) through (88) only.
Cascade Pacific Pulp, LLC—Halsey Pulp Mill.	Order No. 22–3501–A2	8/25/2023	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Cascades Tissue Group: A Division of Cascades Holding US Inc.	Order No. 05–1849	8/18/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Cascades Tissue Group: A Division of Cascades Holding US Inc.	Permit No. 05–1849–TV–01.	04/6/2018	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (24), (25), (27), and (29) through (43) only.
Collins Products, L.L.C	Permit No. 18–0013–TV–01.	1/26/2015	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (3), (14) through (16), (19) through (24), (34) through (42), (63) through (75), and (77) only.
Columbia Forest Products, Inc.	Permit No. 18–0014–TV–01.	9/26/2017	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (3), (8) through (20), (22), (23), (34) through (52), (58) through (66), (67—introductory paragraph), (67.a), (67.b.iii) through (67.b.v), and (68) through (70).
EVRAZ Inc	Order No. 26–1865	8/9/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Gas Transmission Northwest LLC—Compressor Station 12.	Order No. 09–0084	8/9/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Gas Transmission Northwest LLC—Compressor Station 12.	Permit No. 09–0084–TV–01.	8/10/2017	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (32) through (34) and (37) through (50) only.
Gas Transmission Northwest LLC—Compressor Station 13.	Order No. 03–2729–A1	6/1/2022	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	OAH CASE NO. 2021–ABC–04835; DEQ CASE NO. AQ/RH–HQ–2021–140.

EPA APPROVED OREGON SOURCE-SPECIFIC REQUIREMENTS ¹—Continued

Name of source	Permit or order number	State effective date	EPA approval date	Explanations
Gas Transmission North-west LLC—Compressor Station 13.	Permit No. 18–0096–TV–01.	7/11/2018	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (24) through (26), (32) through (35), and (37) through (44) only.
Georgia-Pacific—Toledo LLC.	Order No. 21–0005, Amendment No. 21–005–A1.	12/5/2022	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Georgia Pacific—Wauna Mill.	Order No. 04–0004, Amendment No. 04–004–A1.	12/5/2022	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Gilchrist Forest Products ...	Permit No. 18–0005–TV–01.	7/25/2023	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (4), (5), (9), (10), (12) though (19), (41) through (43), (45) through (59), and (61) only.
International Paper—Springfield.	Order No. 208850	8/9/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
International Paper—Springfield.	Permit No. 208850	10/4/2016	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (186) through (189), (192), and (198) only.
JELD–WEN	Permit No. 18–0006–TV–01.	12/01/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (55) through (77) and (80) through (87) only.
JELD–WEN	Permit No. 18–0006–TV–01, Addendum No. 1.	8/11/2022	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions 53 and 53b only.
Kingsford Manufacturing Company.	Permit No. 204402, addendum No. 2.	11/15/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (71) through (73) and (75) through (91) only.
Klamath Energy LLC—Klamath Cogeneration.	Permit No. 18–0003–TV–01.	6/12/2017	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (10) through (16), (18), (24) through (28), (32) through (37), (39) through (49), (51), (52), and (54), and (56) only.
Klamath Energy LLC—Klamath Cogeneration.	Permit No. 18–0003–TV–01, Addendum No. 1.	12/8/2020	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (3.a), (3.b), (61.i), and (66.b.xii).
Northwest Pipeline LLC—Baker Compressor Station.	Order No. 01–0038, amendment 01–0038–A1.	2/1/2022	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Northwest Pipeline LLC—Baker Compressor Station.	Permit No. 01–0038–TV–01.	1/12/2017	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (27) through (30) and (32) through (43) only.
Northwest Pipeline LLC—Oregon City Compressor Station.	Order No. 03–2729, amendment 03–2729–A1.	2/1/2022	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Northwest Pipeline LLC—Oregon City Compressor Station.	Permit No. 03–2729–TV–01.	2/19/2013	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (7), (19), (25) through (27), (38), (41), (45), and (50) through (65).
Ochoco Lumber Company	Permit No. 12–0032–ST–01.	6/25/2019	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (1.1) through (1.3), (1.6), (2.1) through (2.5), (4.1) through (4.4), and (5.1) through (6.2).

EPA APPROVED OREGON SOURCE-SPECIFIC REQUIREMENTS ¹—Continued

Name of source	Permit or order number	State effective date	EPA approval date	Explanations
Owens-Brockway Glass Container Inc.	Order No. 26–1876	8/9/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Owens-Brockway Glass Container Inc.	Permit No. 26–1876–TV–01.	12/10/2019	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (33) through (48) only.
Pacific Wood Laminates, Inc.	Permit No. 08–0003–TV–01.	12/30/2019	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (3), (9), (10), (12) through (19), (26) through (41), (56) through (71), and (73) only.
PGE Beaver Plant/Port Westward I Plant.	Order No. 05–2606	8/10/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
PGE Beaver Plant/Port Westward I Plant.	Permit No. 05–2520	01/21/2009	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (62) through (66), (68) through (78), (79.a), (80) through (83), (85), (87), (88.a), (89.d), (89.f), and (89.i) only.
Roseburg Forest Products—Dillard.	Order No. 10–0025	8/9/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Roseburg Forest Products—Medford MDF.	Permit No. 15–0073–TV–01.	08/18/2022	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (44) through (46), (48) through (61), (63), and (64) only.
Roseburg Forest Products—Riddle Plywood.	Permit No. 10–0078–TV–01.	07/31/2019	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (65), (66), (68) through (81) only.
Swanson Group Mfg. LLC	Permit No. 10–0045–TV–01	06/12/2017	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (4), (10) through (24), (25—introductory paragraph), (25.a) through (25.c), (27) through (40), (50) through (64), and (66) only.
Timber Products Co. Limited Partnership.	Permit No. 15–0025–TV–01.	6/23/2022	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (70) through (72) and (74) through (90) only.
Willamette Falls Paper Company.	Order No. 03–2145	8/9/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
Willamette Falls Paper Company.	Permit No. 03–2145–TV–01.	2/24/2016	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (40) through (55) only.
Woodgrain Millwork LLC—Particleboard.	Permit No. 31–0002–TV–01.	5/24/2021	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	Permit conditions (3), (12) through (21), (22—introductory paragraph), (22.a), (22.e), (22.f), (23), (25) through (28), (30) through (35), (37), (39) through (41), (43), (44), (46), (48), (49), (51) through (72), (80) through (94), and (96) only.

¹ The EPA does not have the authority to remove these source-specific requirements in the absence of a demonstration that their removal would not interfere with attainment or maintenance of the NAAQS, violate any prevention of significant deterioration increment or result in visibility impairment. The Oregon Department of Environmental Quality may request removal by submitting such a demonstration to the EPA as a SIP revision.

(e) * * *

TABLE 5—STATE OF OREGON AIR QUALITY CONTROL PROGRAM—NONREGULATORY PROVISIONS AND QUASI-REGULATORY MEASURES

Name of SIP provision	Applicable geographic or nonattainment area	State submittal date	EPA approval date	Explanations
*	*	*	*	*
Section 5—Control Strategies for Attainment and Nonattainment Areas				
Oregon Regional Haze State Implementation Plan Revision for the Second Planning Period (2018–2028).	Statewide	4/29/2022 and 11/22/2023	10/8/2024, [INSERT FIRST PAGE OF FEDERAL REGISTER CITATION].	
*	*	*	*	*

[FR Doc. 2024–22603 Filed 10–7–24; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17**

[FXES1111090FEDR–245–FF09E21000]

Endangered and Threatened Wildlife and Plants; 90-Day Findings for 8 Species**AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Notification of petition findings and initiation of status reviews.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce 90-day findings on eight petitions to add species to the Lists of Endangered and Threatened Wildlife and Plants under the Endangered Species Act of 1973, as amended (Act). Based on our review, we find that the petitions to list the Crater Lake newt (*Taricha granulosa mazamae*), Florida intertidal firefly (*Micronaspis floridana*), Iowa skipper (*Atrytone arogos iowa*), San Francisco Estuary population of white sturgeon (*Acipenser transmontanus*), and Tecopa bird's beak (*Chloropyron tecopense*) present substantial scientific or commercial information indicating that the petitioned actions may be warranted. Therefore, with the publication of this document, we announce that we are initiating status reviews of these species to determine whether the petitioned actions are warranted. To ensure that the status reviews are comprehensive, we request

scientific and commercial data and other information regarding the species and factors that may affect their status. Based on the status reviews, we will issue 12-month petition findings, which will address whether or not the petitioned actions are warranted in accordance with the Act. We further find that the petitions to list *Betta miniopinna*, long-tailed macaque (*Macaca fascicularis*), and southern pig-tailed macaque (*Macaca nemestrina*) do not present substantial information indicating the petitioned action may be warranted. Therefore, we are not initiating status reviews of *Betta miniopinna*, long-tailed macaque, or southern pig-tailed macaque.

DATES: These findings were made on October 8, 2024. As we commence our status reviews, we seek any new information concerning the status of, or threats to, the Crater Lake newt, Florida intertidal firefly, Iowa skipper, San Francisco Estuary population of white sturgeon, and Tecopa bird's beak, or their habitats. Any information we receive during the course of our status reviews will be considered.

ADDRESSES:

Supporting documents: Summaries of the basis for the petition findings contained in this document are available on <https://www.regulations.gov> under the appropriate docket number (see tables under **SUPPLEMENTARY INFORMATION**). In addition, this supporting information is available by contacting the appropriate person, as specified in **FOR FURTHER INFORMATION CONTACT**.

Status reviews: If you have new scientific or commercial data or other information concerning the status of, or

threats to, the Crater Lake newt, Florida intertidal firefly, Iowa skipper, San Francisco Estuary population of white sturgeon, or Tecopa bird's beak, or their habitats, please provide those data or information by one of the following methods listed below.

(1) **Electronically:** Go to the Federal eRulemaking Portal: <https://www.regulations.gov>. In the Search box, enter the appropriate docket number (see table 1 under **SUPPLEMENTARY INFORMATION**). Then, click on the "Search" button. After finding the correct document, you may submit information by clicking on "Comment." If your information will fit in the provided comment box, please use this feature of <https://www.regulations.gov>, as it is most compatible with our information review procedures. If you attach your information as a separate document, our preferred file format is Microsoft Word. If you attach multiple comments (such as form letters), our preferred format is a spreadsheet in Microsoft Excel.

(2) **By hard copy:** Submit by U.S. mail to: Public Comments Processing, Attn: [Insert appropriate docket number; see table 1 under **SUPPLEMENTARY INFORMATION**], U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send information only by the methods described above. We will post all information we receive on <https://www.regulations.gov>. This generally means that we will post any personal information you provide us (see Information Submitted for a Status Review, below).

FOR FURTHER INFORMATION CONTACT:

Species common name	Contact person
<i>Betta miniopinna</i>	Rachel London, Manager, Branch of Delisting and Foreign Species, Ecological Services Headquarters, 703-358-2491, rachel_london@fws.gov .
Crater Lake newt	Jennie Land, Field Supervisor, Klamath Falls Fish and Wildlife Office, 541-885-8481, jennie_land@fws.gov .
Florida intertidal firefly	Lourdes Mena, Classification and Recovery Division Manager, Florida Ecological Services Office, 904-731-3134, lourdes_mena@fws.gov .
Iowa skipper	Jason Luginbill, Project Leader, Kansas Ecological Services Field Office, 785-313-0772, jason_luginbill@fws.gov .
Long-tailed macaque	Rachel London, Manager, Branch of Delisting and Foreign Species, Ecological Services Headquarters, 703-358-2491, rachel_london@fws.gov .
San Francisco Estuary population of white sturgeon.	Donald Ratcliff, Field Supervisor, San Francisco Bay-Delta Fish and Wildlife Office, 916-930-5632, donald_ratcliff@fws.gov .
Southern pig-tailed macaque	Rachel London, Manager, Branch of Delisting and Foreign Species, Ecological Services Headquarters, 703-358-2491, rachel_london@fws.gov .
Tecopa bird's beak	Scott Sobiech, Field Supervisor, Carlsbad Fish and Wildlife Office, 760-431-9440, scott_sobiech@fws.gov .

Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Information Submitted for a Status Review

You may submit your comments and materials concerning the status of, or threats to, the Crater Lake newt, Florida intertidal firefly, Iowa skipper, San Francisco Estuary population of white sturgeon, or Tecopa bird's beak, or their habitats, by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**. Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

If you submit information via <https://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <https://www.regulations.gov>.

Comments and materials we receive, as well as supporting documentation we used in preparing these findings, will be available for public inspection on <https://www.regulations.gov>.

Background

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations in title 50 of the Code of Federal Regulations (50 CFR part 424) set forth the procedures for adding species to, removing species from, or reclassifying species on the Federal Lists of Endangered and Threatened Wildlife and Plants (Lists or List) in 50 CFR part 17. Section 4(b)(3)(A) of the Act requires that we make a finding on whether a petition to add a species to the List (*i.e.*, “list” a species), remove a species from the List (*i.e.*, “delist” a species), or change a listed species’ status from endangered to threatened or from threatened to endangered (*i.e.*, “reclassify” a species) presents substantial scientific or commercial information indicating that the petitioned action may be warranted. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition and publish the finding promptly in the **Federal Register**.

Our regulations establish that substantial scientific or commercial information with regard to a 90-day petition finding refers to credible scientific or commercial information in support of the petition’s claims such that a reasonable person conducting an impartial scientific review would conclude that the action proposed in the petition may be warranted (50 CFR 424.14(h)(1)(i)). A positive 90-day petition finding does not indicate that the petitioned action is warranted; the finding indicates only that the petitioned action may be warranted and that a full review should occur.

A species may be determined to be an endangered species or a threatened species because of one or more of the five factors described in section 4(a)(1) of the Act (16 U.S.C. 1533(a)(1)). The five factors are:

(a) The present or threatened destruction, modification, or curtailment of its habitat or range (Factor A);

(b) Overutilization for commercial, recreational, scientific, or educational purposes (Factor B);

(c) Disease or predation (Factor C);

(d) The inadequacy of existing regulatory mechanisms (Factor D); and

(e) Other natural or manmade factors affecting its continued existence (Factor E).

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species’ continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term “threat” to refer in general to actions or conditions that are known to, or are reasonably likely to, affect individuals of a species negatively. The term “threat” includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term “threat” may encompass—either together or separately—the source of the action or condition, or the action or condition itself. However, the mere identification of any threat(s) may not be sufficient to compel a finding that the information in the petition is substantial information indicating that the petitioned action may be warranted. The information presented in the petition must include evidence sufficient to suggest that these threats may be affecting the species to the point that the species may meet the definition of an endangered species or threatened species under the Act.

If we find that a petition presents such information, our subsequent status review will evaluate all identified threats by considering the individual-, population-, and species-level effects and the expected response by the species. We will evaluate individual threats and their expected effects on the species, then analyze the cumulative effect of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that are expected to have positive effects on the species—such as any existing regulatory mechanisms or conservation efforts that may ameliorate threats. It is only after conducting this cumulative analysis of threats and the actions that may

ameliorate them, and the expected effect on the species now and in the foreseeable future, that we can determine whether the species meets the definition of an endangered species or threatened species under the Act. If we find that a petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted, the Act requires that we promptly commence a review of the status of the species, and we will subsequently complete a status review in accordance with our prioritization methodology for 12-month findings (81 FR 49248; July 27, 2016). We note that designating critical habitat is not a petitionable action under the Act. Petitions to designate critical

habitat (for species without existing critical habitat) are reviewed under the Administrative Procedure Act (5 U.S.C. 551 et. seq.) and are not addressed in this finding (see 50 CFR 424.14(j)). To the maximum extent prudent and determinable, any proposed critical habitat will be addressed concurrently with a proposed rule to list a species, if applicable.

Summaries of Petition Findings

The petition findings contained in this document are listed in the tables below, and the basis for each finding, along with supporting information, is available on <https://www.regulations.gov> under the appropriate docket number.

TABLE 1—INTERNET SEARCH INFORMATION FOR SUBSTANTIAL FINDINGS FOR FIVE SPECIES

Common name	Docket No.	URL to docket on https://www.regulations.gov
Crater Lake newt	FWS-R8-ES-2024-0025	https://www.regulations.gov/docket/FWS-R8-ES-2024-0025
Florida intertidal firefly	FWS-R4-ES-2024-0026	https://www.regulations.gov/docket/FWS-R4-ES-2024-0026
Iowa skipper	FWS-R6-ES-2023-0226	https://www.regulations.gov/docket/FWS-R6-ES-2023-0226
San Francisco Estuary population of white sturgeon	FWS-R8-ES-2024-0049	https://www.regulations.gov/docket/FWS-R8-ES-2024-0049
Tecopa bird's beak	FWS-R8-ES-2023-0256	https://www.regulations.gov/docket/FWS-R8-ES-2023-0256

TABLE 2—INTERNET SEARCH INFORMATION FOR NOT-SUBSTANTIAL FINDINGS FOR THREE SPECIES

Common name	Docket No.	URL to docket on https://www.regulations.gov
<i>Betta miniopinna</i>	FWS-HQ-ES-2023-0229	https://www.regulations.gov/docket/FWS-HQ-ES-2023-0229
Long-tailed macaque	FWS-HQ-ES-2023-0228	https://www.regulations.gov/docket/FWS-HQ-ES-2023-0228
Southern pig-tailed macaque	FWS-HQ-ES-2023-0227	https://www.regulations.gov/docket/FWS-HQ-ES-2023-0227

Evaluation of a Petition To List Betta miniopinna
Species and Range
Betta miniopinna; Bintan Island of the Riau Archipelago, Indonesia.

Petition History
On July 6, 2023, we received a petition dated July 5, 2023, from the Center for Biological Diversity and the Monitor Conservation Research Society, requesting that *Betta miniopinna* be emergency listed as a threatened species or an endangered species under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(c). Listing a species on an emergency basis is not a petitionable action under the Act, and the question of when to list on an emergency basis is left to the discretion of the Service. If the Service determines that the standard for emergency listing in section 4(b)(7) of the Act is met, the Service may exercise

that discretion to take an emergency listing action at any time. Therefore, we are considering the July 5, 2023, petition as a petition to list the *B. miniopinna*. This finding addresses the petition.
Finding
We reviewed the petition, sources cited in the petition, and other readily available information (within the constraints of the Act and 50 CFR 424.14(h)(1)). We considered the credible information that the petition provided regarding the individual and cumulative effects of threats that fall within factors under the Act's section 4(a)(1) as potentially ameliorated or exacerbated by any existing regulatory mechanisms or conservation efforts. Based on our review of the petition, sources cited in the petition, and other readily available information, we find that the petition does not provide substantial scientific or commercial information indicating that listing the *B. miniopinna* as a threatened species or

an endangered species may be warranted.
The petitioner provided credible information indicating potential threats to individuals of the species due to habitat loss and degradation and collection and trade. The petitioner also provided credible information that the existing regulatory mechanisms may be inadequate to address those potential threats. Although the petition did provide credible information regarding deforestation at less than one percent per year countrywide, the reference investigated deforestation across the entire country and did not mention either peat swamp forest, the specific habitat type for the species, or Bintan Island, the only island the species is known to exist. Furthermore, the references provided in the petition that discussed peat swamp forests did not include Bintan Island, the island where *B. miniopinna* currently exists. The petition did not link this general deforestation to effects on the species.

Therefore, the petition does not present credible information to support the claim that habitat loss and degradation is having a negative impact on the population(s) of the species.

Additionally, regarding trade, the petitioners only presented information from a brief Google search on the trade of the species. While this brief search presents evidence of some illegal trade in wild specimens of the species, without more thorough information on the amount of trade of wild-caught *B. miniopinna* and abundance estimates, the petition does not present credible information to support the claim that trade is having a negative impact on the population(s) of the species. Credible sources cited in the petition do not provide substantial information indicating that threats identified by the petitions may have synergistic or cumulative effects on the population such that the petitioned action may be warranted for *B. miniopinna*.

The basis for our finding on this petition and other information regarding our review of the petition can be found at <https://www.regulations.gov> under Docket No. FWS-HQ-ES-2023-0229 under the Supporting Documents section.

Evaluation of a Petition To List Crater Lake Newt

Species and Range

Crater Lake newt (*Taricha granulosa mazamae*); Crater Lake, Klamath County, Oregon.

Petition History

On November 28, 2023, we received a petition from the Center for Biological Diversity, requesting that the Crater Lake newt (*Taricha granulosa mazamae*) be emergency listed as an endangered species and critical habitat be designated for this species under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(c). The petitioners additionally requested that the Service immediately protect Crater Lake newts with its emergency listing authority under 16 U.S.C. 1533(b)(7). Because the Act does not provide for petitions to emergency list, we are considering it as a petition to list the Crater Lake newt. Listing a species on an emergency basis is not a petitionable action under the Act, and the question of when to list on an emergency basis is left to the discretion of the Service. If the Service determines that the standard for emergency listing in section 4(b)(7) of the Act is met, the Service may exercise that discretion to

take an emergency listing action at any time. This finding addresses the petition.

Finding

We reviewed the petition, sources cited in the petition, and other readily available information (within the constraints of the Act and 50 CFR 424.14(h)(1)). We considered the credible information that the petition provided regarding effects of the threats that fall within factors under the Act's section 4(a)(1) as potentially ameliorated or exacerbated by any existing regulatory mechanisms or conservation efforts. Based on our review of the petition and readily available information regarding predation by introduced species (particularly by signal crayfish (*Pacifastacus leniusculus*)) (Factor C), we find that the petition presents substantial scientific or commercial information indicating that listing the Crater Lake newt may be warranted. The petitioners also presented information suggesting habitat and food web alteration by signal crayfish, climate change, reduced effective population size, and range restriction may be threats to the Crater Lake newt. We will fully evaluate these potential threats during our 12-month status review, pursuant to the Act's requirement to review the best scientific and commercial information available when making that finding.

The basis for our finding on this petition and other information regarding our review of the petition can be found at <https://www.regulations.gov> under Docket No. FWS-R8-ES-2024-0025 under the Supporting Documents section.

Evaluation of a Petition To List Florida Intertidal Firefly

Species and Range

Florida intertidal firefly (*Micronaspis floridana*); Florida (Brevard, Broward, Charlotte, Citrus, Collier, Dixie, Hernando, Hillsborough, Indian River, Levy, Manatee, Miami-Dade, Monroe, Pasco, Pinellas, Saint Lucie, Sarasota, and Volusia Counties) and the Bahamas.

Petition History

On March 28, 2023, we received a petition from the Xerces Society for Invertebrate Conservation, requesting that the Florida intertidal firefly (*Micronaspis floridana*) be listed as an endangered species and critical habitat be designated for this species under the Act. The petition clearly identified itself as such and included the requisite identification information for the

petitioner, required at 50 CFR 424.14(c). This finding addresses the petition.

Finding

We reviewed the petition, sources cited in the petition, and other readily available information (within the constraints of the Act and 50 CFR 424.14(h)(1)). We considered the credible information that the petition provided regarding the effects of threats that fall within factors under the Act's section 4(a)(1) as potentially ameliorated or exacerbated by any existing regulatory mechanisms or conservation efforts. Based on our review of the petition and readily available information regarding wetland destruction or loss and modified hydrology (Factor A), we find that the petition presents substantial scientific or commercial information indicating that listing the Florida intertidal firefly may be warranted. The petition also presented information on the following potential threats to Florida intertidal firefly: sea level rise, habitat fragmentation, modification of marsh and mangrove habitats for mosquito control, coastal eutrophication, harmful algal blooms, hypoxia, overutilization, nematode infection, predators, light pollution, pesticides, invasive species, small populations, ocean acidification impacts on prey, and increased temperature and extreme temperature events, and increased intensity and proportion of severe storms. We will fully evaluate these potential threats during our 12-month status review, pursuant to the Act's requirement to review the best scientific and commercial information available when making that finding.

The basis for our finding on this petition and other information regarding our review of the petition can be found at <https://www.regulations.gov> under Docket No. FWS-R4-ES-2024-0026 under the Supporting Documents section.

Evaluation of a Petition To List Iowa Skipper

Species and Range

Iowa skipper (*Atrytone arogos iowa*); mid-continent prairie in Arkansas, Colorado, Illinois, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming.

Petition History

On March 28, 2023, we received a petition from the Center for Food Safety, requesting that the Iowa Skipper (*Atrytone arogos iowa*) be listed as a threatened species or an endangered

species under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(c). This finding addresses the petition.

Finding

We reviewed the petition, sources cited in the petition, and other readily available information (within the constraints of the Act and 50 CFR 424.14(h)(1)). We considered the credible information that the petition provided regarding effects of the threats that fall within factors under the Act's section 4(a)(1) as potentially ameliorated or exacerbated by any existing regulatory mechanisms or conservation efforts. Based on our review of the petition and readily available information regarding habitat loss and fragmentation (Factor A) and prairie management (Factor A), we find that the petition presents substantial scientific or commercial information indicating that listing the Iowa skipper may be warranted. The petitioners also presented information suggesting pesticides, invasive species, climate change, and small, isolated populations may be threats to the Iowa skipper. We will fully evaluate these potential threats during our 12-month status review, pursuant to the Act's requirement to review the best scientific and commercial information available when making that finding.

The basis for our finding on this petition and other information regarding our review of the petition can be found at <https://www.regulations.gov> under Docket No. FWS-R6-ES-2023-0226 under the Supporting Documents section.

Evaluation of a Petition To List Long-Tailed Macaque

Species and Range

Long-tailed macaque (*Macaca fascicularis*); Brunei Darussalam, Cambodia, Hong Kong of China, Nicobar Islands of India, Indonesia, Lao People's Democratic Republic, Malaysia, Mauritius, Myanmar, Palau, Papua New Guinea, Philippines, Singapore, Thailand, Timor-Leste, and Vietnam.

Petition History

On April 12, 2023, we received a petition requesting that long-tailed macaque (*Macaca fascicularis*) be listed as a threatened species or an endangered species under the Act from People for the Ethical Treatment of Animals, Lisa Jones-Engel, Birutė Mary Galdikas, Jane Goodall, Action for Primates, Born Free USA, Sarah Kite,

Nedim C. Buyukmihci, Angela Grimes, Liz Tyson-Griffin, The Macaque Coalition, Ecoflox, Ian Redmond, International Primate Protection League, Wildlife Alliance, Physicians Committee for Responsible Medicine, Michael Schillaci, One Voice, Abolición Vivisección, Sam Shanee, Gemunu de Silva, Northwest Animal Rights Network, Pam Mendosa, Phoenix Zones Initiative, Hope Ferdowsian, ACP, Nikhil Kulkarni, Neotropical Primate Conservation, EMS Foundation, Tim Ajax, Rise for Animals, Wildlife Friends Foundation Thailand, Douc Langur Foundation, Fundacion Entropika, Angela Maldonado, Animal Defenders International, World Animal Protection, Paula Pebsworth, and Japan Anti-Vivisection Association. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(c). This finding addresses the petition.

Finding

We reviewed the petition, sources cited in the petition, and other readily available information (within the constraints of the Act and 50 CFR 424.14(h)(1)). We considered the credible information that the petition provided regarding the individual and cumulative effects of the threats that fall within factors under the Act's section 4(a)(1) as potentially ameliorated or exacerbated by any existing regulatory mechanisms or conservation efforts. Based on our review of the petition and readily available information regarding the effects of habitat loss and degradation (Factor A), collection and hunting (Factor B), disease (Factor C), and culling and sterilization (Factor E), we find that the petition does not provide substantial scientific or commercial information indicating that listing the long-tailed macaque as a threatened or an endangered species may be warranted. While we found that the petition provided documentation of negative impacts to individual macaques from these potential threats, the petition did not present credible information to support impacts to populations or the species as a whole due to these potential threats, either separately or cumulatively, such that the species may warrant listing.

The basis for our finding on this petition and other information regarding our review of the petition can be found at <https://www.regulations.gov> under Docket No. FWS-HQ-ES-2023-0228 under the Supporting Documents section.

Evaluation of a Petition To List San Francisco Estuary Population of White Sturgeon

Species and Range

White sturgeon [petitioned "San Francisco Estuary Distinct Population Segment"] (*Acipenser transmontanus*) (= San Francisco Estuary white sturgeon); Sacramento and San Joaquin Rivers in California.

Petition History

On December 6, 2023, we received a petition from San Francisco Baykeeper, The Bay Institute, Restore the Delta, and California Sportfishing Protection Alliance, requesting that the San Francisco Estuary white sturgeon population (*Acipenser transmontanus*) be listed as a threatened distinct population segment (DPS) and critical habitat be designated for this species under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(c). This finding addresses the petition.

Finding

We reviewed the petition, sources cited in the petition, and other readily available information (within the constraints of the Act and 50 CFR 424.14(h)(1)). We considered the credible information that the petition provided regarding effects of the threats that fall within factors under the Act's section 4(a)(1) as potentially ameliorated or exacerbated by any existing regulatory mechanisms or conservation efforts. Based on our review of the petition and readily available information regarding harmful algal blooms (Factor E), we find that the petition presents substantial scientific or commercial information indicating that listing the San Francisco Estuary population of white sturgeon as a DPS may be warranted. The petitioners also presented information suggesting dams, water diversions, entrainment mortality, recreational harvest, poaching, pollution, climate change, proposed hatchery supplementation, ship strikes, and dredging may be threats to the San Francisco Estuary white sturgeon. We will fully evaluate these potential threats during our 12-month status review, pursuant to the Act's requirement to review the best scientific and commercial information available when making our 12-month finding.

The basis for our finding on this petition and other information regarding our review of the petition can be found at <https://www.regulations.gov> under Docket No. FWS-R8-ES-2024-0049

under the Supporting Documents section.

Evaluation of a Petition To List Southern Pig-Tailed Macaque

Species and Range

Southern pig-tailed macaque (*Macaca nemestrina*); Brunei Darussalam, Indonesia (Kalimantan, Sumatra), Malaysia (Peninsular Malaysia, Sabah, Sarawak), and Thailand.

Petition History

On April 12, 2023, we received a petition requesting that southern pig-tailed macaque (*Macaca nemestrina*) be listed as a threatened species or an endangered species under the Act from People for the Ethical Treatment of Animals, Lisa Jones-Engel (Ph.D.), Birute Mary Galdikas (Ph.D.), Jane Goodall (Ph.D.), Action for Primates, Born Free USA, Sarah Kite, Nedim Buyukmihci (Ph.D.), Angela Grimes, Liz Tyler-Griffin (Ph.D.), The Macaque Coalition, Ecoflox, Ian Redmond (Ph.D.), International Primate Protection League, Wildlife Alliance, the Physicians Committee for Responsible Medicine, Michael Schillaci (Ph.D.), One Voice, Abolicion Viviseccion, Sam Shanee (Ph.D.), Gemunu de Silva, Northwest Animal Rights Network, Pam Mendosa, Phoenix Zones Initiative, Hope Ferdowsian (Ph.D.), Nikhil Kulkarni (Ph.D.), Neotropical Primate Conservation, The EMS Foundation, Tim Ajax, Rise for Animals, Wildlife Friends Foundation Thailand, Douc Langur Foundation, Fundacion Entropika, Angela Maldonado (Ph.D.), Animal Defenders International, World Animal Protection, Paula Pebsworth, and The Japan Anti-Vivisection Association. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(c). This finding addresses the petition.

Finding

We reviewed the petition, sources cited in the petition, and other readily available information (within the constraints of the Act and 50 CFR 424.14(h)(1)). We considered the credible information that the petition provided regarding the individual and cumulative effects of threats that fall within factors under the Act's section 4(a)(1) as potentially ameliorated or exacerbated by any existing regulatory mechanisms or conservation efforts. Based on our review of the petition, sources cited in the petition, and other readily available information, we find that the petition does not provide

substantial scientific or commercial information indicating that listing the southern pig-tailed macaque as a threatened species or an endangered species may be warranted. While we found that the petition provided documentation of negative impacts to individual macaques from these potential threats, the petition did not present credible information to support impacts to populations or the species and the petition did not present credible information to support impacts to populations or the species as a whole due to these potential threats, either separately or cumulatively, such that the species may warrant listing.

The basis for our finding on this petition and other information regarding our review of the petition can be found at <https://www.regulations.gov> under Docket No. FWS-HQ-ES-2023-0227 under the Supporting Documents section.

Evaluation of a Petition To List Tecopa Bird's Beak

Species and Range

Tecopa bird's beak (*Chloropyron tecopense*); Esmeralda and Nye Counties in Nevada and Inyo County in California.

Petition History

On September 26, 2023, we received a petition from the Center for Biological Diversity, requesting that Tecopa bird's beak (*Chloropyron tecopense*) be listed as a threatened species or an endangered species and critical habitat be designated for this species under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(c). This finding addresses the petition.

Finding

We reviewed the petition, sources cited in the petition, and other readily available information (within the constraints of the Act and 50 CFR 424.14(h)(1)). We considered the credible information that the petition provided regarding effects of the threats that fall within factors under the Act's section 4(a)(1) as potentially ameliorated or exacerbated by any existing regulatory mechanisms or conservation efforts. Based on our review of the petition and readily available information regarding hydrological alteration and groundwater extraction related to agriculture and exurban sprawl (Factor A), we find that the petition presents substantial scientific or commercial information indicating that listing the Tecopa bird's

beak may be warranted. The petitioners also presented information suggesting off-road vehicles, non-native ungulate grazing, herbivory, climate change, and invasive species, as well as other potential effects from geothermal power production and mineral exploration and development, may be threats to the Tecopa bird's beak. We will fully evaluate these potential threats during our 12-month status review, pursuant to the Act's requirement to review the best scientific and commercial information available when making that finding.

The basis for our finding on this petition and other information regarding our review of the petition can be found at <https://www.regulations.gov> under Docket No. FWS-R8-ES-2023-0256 under the Supporting Documents section.

Conclusion

On the basis of our evaluation of the information presented in the petitions under section 4(b)(3)(A) of the Act, we have determined that the petitions summarized above for the Crater Lake newt, Florida intertidal firefly, Iowa skipper, San Francisco Estuary population of white sturgeon, and Tecopa bird's beak present substantial scientific or commercial information indicating that the petitioned actions may be warranted. We are, therefore, initiating status reviews of these species to determine whether the actions are warranted under the Act. At the conclusion of the status reviews, we will issue findings, in accordance with section 4(b)(3)(B) of the Act, as to whether the petitioned actions are not warranted, warranted, or warranted but precluded by pending proposals to determine whether any species is an endangered species or a threatened species. In addition, we have determined that the petitions summarized above for *Betta miniopinna*, long-tailed macaque, and southern pig-tailed macaque do not present substantial scientific or commercial information indicating that the petitioned actions may be warranted. We are, therefore, not initiating status reviews for these species in response to the petitions.

Authors

The primary authors of this document are staff members of the Ecological Services Program, U.S. Fish and Wildlife Service.

Authority

The authority for these actions is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Martha Williams,

Director, U.S. Fish and Wildlife Service.

[FR Doc. 2024–22914 Filed 10–7–24; 8:45 am]

BILLING CODE 4333–15–P

DEPARTMENT OF COMMERCE**National Oceanic and Atmospheric Administration****50 CFR Part 679**

[Docket No. 24034–0068; RTID 0648–XE347]

Fisheries of the Exclusive Economic Zone Off Alaska; Reallocation of Atka Mackerel in the Bering Sea and Aleutian Islands Management Area

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule; reallocation.

SUMMARY: NMFS is reallocating the projected unused amount of the 2024

Atka mackerel incidental catch allowance (ICA) for the Bering Sea subarea and Eastern Aleutian district (BS/EAI) to the Amendment 80 cooperative allocation for the BS/EAI in the Bering Sea and Aleutian Islands management area (BSAI). This action is necessary to allow the 2024 total allowable catch of Atka mackerel in the BSAI to be fully harvested.

DATES: Effective October 7, 2024 through 2400 hours, A.L.T., December 31, 2024.

FOR FURTHER INFORMATION CONTACT: Steve Whitney, 907–586–7228.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the BSAI according to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR parts 600 and 679.

The 2024 Atka mackerel ICA for the BS/EAI is 800 metric tons (mt) and the

2024 Atka mackerel total allowable catch allocated to the Amendment 80 cooperative for the BS/EAI is 25,081 mt as established by the final 2024 and 2025 harvest specifications for groundfish in the BSAI (89 FR 17287, March 11, 2024).

The Administrator, Alaska Region, NMFS, has determined that 700 mt of the Atka mackerel ICA for the BS/EAI will not be harvested. Therefore, in accordance with § 679.91(f), NMFS reallocates 700 mt of Atka mackerel from the BS/EAI ICA to the BS/EAI Amendment 80 cooperative allocation in the BSAI. In accordance with § 679.91(f), NMFS will reissue the cooperative quota permit for the reallocated Atka mackerel following the procedures set forth in § 679.91(f)(3).

The harvest specifications for Atka mackerel included in the harvest specifications for groundfish in the BSAI (89 FR 17287, March 11, 2024) are revised as follows: 100 mt of Atka mackerel for the BS/EAI ICA and 25,781 mt of Atka mackerel for the Amendment 80 cooperative allocation for the BS/EAI. Table 7 is revised and republished in its entirety as follows:

TABLE 7—FINAL 2024 SEASONAL AND SPATIAL ALLOWANCES, GEAR SHARES, CDQ RESERVE, INCIDENTAL CATCH ALLOWANCE, AND AMENDMENT 80 ALLOCATIONS OF THE BSAI ATKA MACKEREL TAC

[Amounts are in metric tons]

Sector ¹	Season ^{2,3,4}	2024 Allocation by area		
		Eastern Aleutian District/Bering Sea	Central Aleutian District ⁵	Western Aleutian District
TAC	n/a	32,260	16,754	23,973
CDQ reserve	Total	3,452	1,793	2,565
	A	1,726	896	1,283
	Critical Habitat	n/a	538	770
	B	1,726	896	1,283
	Critical Habitat	n/a	538	770
Non-CDQ TAC	n/a	28,808	14,961	21,408
ICA	Total	100	75	20
Jig ⁶	Total	140		
BSAI trawl limited access	Total	2,787	1,489	
	A	1,393	744	
	Critical Habitat	n/a	447	
	B	1,393	744	
	Critical Habitat	n/a	447	
Amendment 80 sector	Total	25,781	13,398	21,388
	A	12,891	6,699	10,694
	Critical Habitat	n/a	4,019	6,416
	B	12,891	6,699	10,694
	Critical Habitat	n/a	4,019	6,416

Note: Seasonal or sector apportionments may not total precisely due to rounding.

¹ Section 679.20(a)(8)(ii) allocates the Atka mackerel total allowable catches (TACs), after subtracting the community development quota (CDQ) reserves, ICAs, and jig gear allocation, to the Amendment 80 and BSAI trawl limited access sectors. The allocation of the Initial total allowable catch (ITAC) for Atka mackerel to the Amendment 80 and BSAI trawl limited access sectors is established in table 33 to 50 CFR part 679 and § 679.91. The CDQ reserve is 10.7 percent of the TAC for use by CDQ participants (see § 679.20(b)(1)(ii)(C)).

² Sections 679.20(a)(8)(ii)(A) and 679.22(a) establish temporal and spatial limitations for the Atka mackerel fishery.

³ The seasonal allowances of Atka mackerel for the CDQ reserve, BSAI trawl limited access sector, and Amendment 80 sector are 50 percent in the A season and 50 percent in the B season.

⁴ Section 679.23(e)(3) authorizes directed fishing for Atka mackerel with trawl gear during the A season from January 20 to June 10 and the B season from June 10 to December 31.

⁵ Section 679.20(a)(8)(ii)(C)(1)(i) limits no more than 60 percent of the annual TACs in Areas 542 and 543 to be caught inside of Steller sea lion protection areas; section 679.20(a)(8)(ii)(C)(1)(ii) equally divides the annual harvest limits between the A and B seasons as defined at § 679.23(e)(3); and section 679.20(a)(8)(ii)(C)(2) requires that the TAC in Area 543 shall be no more than 65 percent of Acceptable Biological Catch (ABC) in Area 543.

⁶ Sections 679.2 and 679.20(a)(8)(i) require that up to 2 percent of the Eastern Aleutian Islands District and the Bering Sea subarea TAC be allocated to jig gear after subtracting the CDQ reserve and the ICA. NMFS sets the amount of this allocation for 2024 at 0.5 percent. The jig gear allocation is not apportioned by season.

This will enhance the socioeconomic well-being of harvesters dependent upon Atka mackerel in this area. The Regional Administrator considered the following factors in reaching this decision: (1) the current catch of Atka mackerel ICA in the BS/EAI, and (2) the harvest capacity and stated intent on future harvesting patterns of the Amendment 80 cooperative that participates in this BS/EAI fishery.

Classification

NMFS issues this action pursuant to section 305(d) of the Magnuson-Stevens Act. This action is required by 50 CFR part 679, which was issued pursuant to

section 304(b), and is exempt from review under Executive Order 12866.

Pursuant to 5 U.S.C. 553(b)(B), there is good cause to waive prior notice and an opportunity for public comment on this action, as notice and comment would be impracticable and contrary to the public interest, as it would prevent NMFS from responding to the most recent fisheries data in a timely fashion, and would delay the harvest of Atka mackerel in the BS/EAI fishery. NMFS was unable to publish a notice providing time for public comment because the most recent, relevant data only became available as of September 25, 2024.

The Assistant Administrator for Fisheries, NOAA also finds good cause to waive the 30-day delay in the effective date of this action under 5 U.S.C. 553(d)(3). This finding is based upon the reasons provided above for waiver of prior notice.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: October 3, 2024.

Karen H. Abrams,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2024–23249 Filed 10–7–24; 8:45 am]

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Proposed Rules

Federal Register

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

7 CFR Part 800

[Doc. No. AMS-FGIS-24-0027]

RIN 0581-AE28

Formulas for Calculating Hourly and Unit Fees for FGIS Services

AGENCY: Agricultural Marketing Service, Department of Agriculture (USDA).

ACTION: Notice of proposed rulemaking.

SUMMARY: The Agricultural Marketing Service (AMS), Federal Grain Inspection Service (FGIS or Service) proposes to amend its user fee regulations to establish standardized formulas the agency would use to calculate hourly and unit fees. The proposed changes would allow FGIS to charge reasonable fees sufficient to cover the costs of providing official services and re-establish a 3-to 6-month operating reserve, as required by the United States Grain Standards Act (USGSA). This proposed rulemaking would also make specified conforming changes and minor technical changes to the regulations to correct two typographical errors.

DATES: Comments are due on or before November 22, 2024.

ADDRESSES: Interested persons are invited to submit written comments on this proposed rulemaking. AMS encourages comments to be submitted through the Federal eRulemaking Portal at <https://www.regulations.gov>. Please go to <https://www.regulations.gov> and follow the online instructions at that site for submitting comments for AMS-FGIS-24-0027. All comments submitted in response to this proposal are part of the public record and will be posted for public viewing without change at <https://www.regulations.gov>. All personal identifying information (e.g., name, address), confidential business information, or otherwise sensitive

information submitted voluntarily by the commenter will be publicly accessible. AMS will accept anonymous comments (enter "N/A" in the required fields if you wish to remain anonymous).

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SUPPLEMENTARY INFORMATION: This proposed rulemaking would amend FGIS's user fee regulations to establish standardized formulas the agency would use to calculate hourly and unit fees. The proposed new formulas, which are similar to the standardized formulas used in other AMS user-fee funded grading programs, would amend the regulations at 7 CFR 800.71. The formulas proposed here would enable the agency to sustain operations and comply with the USGSA, which requires FGIS to charge fees sufficient to cover the costs of the official services it provides and to adjust fees annually in order to maintain an operating reserve of not less than 3 and not more than 6 months. Prospective customers can find the fee schedules posted on AMS's public website at: <https://www.ams.usda.gov/about-ams/fgis-program-directives>.

Background

The USGSA authorizes and requires the Secretary of Agriculture to charge and collect reasonable fees to cover the estimated costs for performing official grain inspection and weighing services (which are mandatory under the Act for U.S. grain exports). In 2015, Congress amended the USGSA to provide that "[i]n order to maintain an operating reserve of not less than 3 and not more than 6 months, the Secretary shall adjust the fees . . . not less frequently than annually." (7 U.S.C. 79(j)(4) and 79a(l)(3)). To comply with these provisions, FGIS, then the Grain Inspection, Packers, and Stockyards Administration (GIPSA), issued regulations requiring the agency to review and adjust fees annually in order to maintain a 3- to 6-month reserve of operating expenses. (81 FR 49855).

Through those regulations, the Service determined that maintaining the operating reserve at 4.5-months of operating expenses would comply with the statutory requirement that FGIS maintain an operating reserve of 3 to 6 months. Under the current regulation, in years when the operating reserve has been sufficient, for each \$1 million that the reserve's balance exceeded 4.5 months, the Service reduced fees by 2 percent, and no greater than 5 percent. Conversely, in years when the operating reserve was projected to be insufficient, for each \$1 million that the balance fell short of the 4.5-month target, the Service increased fees by 2 percent, while also capping such increases at 5 percent. The current regulations limit annual fee increases or decreases to no greater than 5 percent.

The current regulations provide for FGIS review and revision of fees annually (800.71(b)) to establish the tonnage fees (national and local) and supervision fees. The annual adjustment of fees is based on the operating reserve total at the end of the prior fiscal year. Fees are increased or decreased to maintain an operating reserve of 4.5 months of operating expenses. Historically, the operating reserve balance remained higher than the 4.5-month target, so FGIS annually reduced fees by the maximum amount, 5 percent, in 2017 (81 FR 96339), 2018 (83 FR 6451), and 2019 (84 FR 11926); and by 2 percent in 2020 (85 FR 8536).

However, at the close of FY 2020, FGIS was operating at a loss of \$5 million and had an operating reserve balance below 4.5 months of operating expenses. In accordance with current regulations, FGIS increased fees by 5 percent in 2021 (86 FR 1475), 2022 (87 FR 920), and 2023 (88 FR 18512). These annual fee increases were not sufficient to both cover operating costs and maintain a sufficient operating reserve. Because of the cap on how much the annual increase could be, 2023 fees were lower than those charged in 2016 (e.g., the contract regular hourly rate in 2016 was \$40.20 and, in 2023, the rate was \$39.20). A drop in export tonnage (and its associated revenue) further increased the FGIS deficit. Table 1 below illustrates the interplay between FGIS revenues, reserve balances, and fee adjustments over the previous 5 years.

TABLE 1—FGIS GRAIN INSPECTION AND WEIGHING NET INCOME AND OPERATING RESERVE FOR THE LAST 5 FISCAL YEARS

Fiscal year	Operating			Annual export tons ¹ (million metric tons)	Fee adjustment (fiscal year end) (%)
	Net (millions)	Reserve balance			
		(millions)	(months)		
2019	(\$6)	\$15.5	5	108	Reduced 5.
2020	(5.5)	10	3	110	Reduced 2.
2021	(3)	7	2.5	137	Increased 5.
2022	(4)	3	1	124	Increased 5.
2023	(3.5)	(0.5)	(0.3)	97	Increased 5.

¹ The data in this column represent export grain officially inspected and/or weighed (excluding land carrier shipments to Canada and Mexico inspected or weighed by delegated States and designated agencies), and outbound grain officially inspected and/or weighed by FGIS.

Since 2021, the expected revenue from user fees has been lower than FGIS anticipated. During this time, the export volume (on which FGIS assesses tonnage fees) has declined year-over-year: by 10 percent in 2022, and 22 percent in 2023. Through June 20, 2024, export volumes are 5 percent higher than the same period in 2023, but still 6 percent lower than the five-year average. Reduced export volume has also impacted FGIS's ability to reestablish a sufficient operating reserve. This decline has been, in part, impacted by natural disasters. Though export volumes vary depending on weather, prices, and global demand, export volumes had risen in consecutive years since 2018. This significant decline was not expected, and the hurricane and severe drought were major unexpected events that contributed to the sudden decline in export volume.

In August 2021, Hurricane Ida struck the coast of Louisiana just prior to the high-volume harvest season. The lower Mississippi River handles over half of U.S. grain exports, and many of the major grain exporters sustained damage and could not return to normal operations for months. Grain export inspection volume declined by 10 percent in 2022, and corresponding FGIS user fee revenue dropped by \$3 million in FY 2022.

Then, in 2022, a severe drought struck the midwestern U.S., and parts of the Mississippi River, which handles the barge traffic that feeds the nation's largest export market, sunk to the lowest levels in recorded history, dating back 143 years. Those record-low river levels hindered barge and vessel loading operations, and export volumes declined by another 22 percent year-over-year from 2022 to 2023. FGIS experienced another \$3.5 million reduction in revenue for the same period. In the two years following the hurricane and drought, FGIS revenue was down a combined \$6.5 million.

Agency operating costs were also significantly impacted by the COVID-19 Pandemic, as well as information technology and cost-of-living expenses increases.

While the above discussed conditions individually presented significant challenges, their unprecedented, cumulative effect over a short time span limited FGIS's ability to recover its costs and contributed to the depletion of FGIS's reserves, jeopardizing its current ability to sustain and provide inspection and weighing services.

2023 Periodic Review

Under the current regulations, FGIS can review all fees to "ensure they reflect the true cost of providing and supervising official service." (7 CFR 800.71(c)). Given the confluence of events outside the agency's control, FGIS performed a periodic review in 2023 that examined the costs of all services offered. The review disclosed that most FGIS fees were misaligned with the actual costs of services and that the current regulatory fee formulas did not account for all agency costs and operating expenses. This misalignment and failure to account for actual costs and expenses has contributed to the current financial situation. The operating reserves for grain inspection and weighing activities at the end of FY 2023 were \$0.

New Fee Formulas

This proposed rulemaking would amend FGIS's user fee regulations at 7 CFR 800.71 to revise the formulas the agency uses to calculate fees annually. The proposed changes would enable FGIS to assess fees for official services that are sufficient to cover its costs and maintain a 3- to 6-month operating reserve. The proposed changes would also provide transparency and predictability to the grain industry, and allow FGIS to plan effectively for staffing, equipment investments, and

procurement or development of inspection technology.

The formulas in this proposed rulemaking are modeled after the standardized formulas AMS uses to calculate user fees in other user-fee funded grading programs (e.g., AMS's dairy, beef, poultry, egg, cotton, and specialty crops grading programs). Established in 2014 (79 FR 67313), the standardized method enables AMS to use current information about resource needs and projected costs of providing services to update rates for services, thus better avoiding unexpected financial shortfalls or unintended reserve surpluses. AMS believes that adopting similar formulas to calculate user fees for grain inspection and weighing services would help FGIS adjust the operating reserve account as necessary and provide its customers with information they need for planning purposes. Once the reserve balance has reached an appropriate level, FGIS anticipates that the standardized formulas for fee rates will appropriately account for increases or decreases in the actual costs of providing inspection services.

The primary purpose of this proposed rulemaking is to address gaps in the current fee formulas. The current FGIS tonnage formula accounts only for fees assessed on grain tonnage and supervision of official agencies (§ 800.71(b)(1) and (b)(2)); it excludes direct service costs and unit fees. In addition, the current formulas only account for an adjustment based on the operating reserve balance, and do not consider other factors or include any projection for the next year's costs. In an environment where costs are generally going up (even if slowly), FGIS fees compared to costs would lag at least one year behind, since the formulas are looking at prior years without projection toward potential cost increases. The formulas proposed in this document would address these gaps; specifically, the proposed formulas would consider

the previous year's expenses and project future year costs by including a cost-of-living adjustment and an operating reserve adjustment. These specific formulas are described further in this section.

As with other programs, FGIS would perform financial analyses each year to determine whether the current fees are adequate to recover the costs incurred by providing grain inspection and weighing services. FGIS would use historical or prior year cost and workload data, along with applicable projections, to generate estimates of future obligations and revenues, as described further below in this proposed rulemaking. On the bases of these analyses and formulas, FGIS would determine the rates necessary to sustain grain inspection and weighing services. Using the proposed formulas to calculate the fees, and reviewing the fees on an annual basis would more accurately reflect the actual cost of providing services each year and would provide greater transparency and predictability to the grain industry. FGIS would publish the fees for each upcoming year in an annual user-fee notice in the **Federal Register**. The yearly notice would include both the per-hour rates and the per-unit rates. Updated fees schedules would no longer appear in the Code of Federal Regulations but would be available on the FGIS website.

Definitions

In order to provide additional clarity, FGIS defines the following terms used throughout this document as follows:

Bad debt—accounts receivable that will likely remain uncollectable and will be written off.

Benefits—various non-wage compensation provided to employees in addition to their normal wages or salaries.

Cost of living—the cost of maintaining a certain standard of living based on economic assumptions issued by the Office of Management and Budget (OMB).

Direct hours—the regular hours worked by employees of FGIS. This does not include overtime or holiday hours.

Direct pay—monetary compensation paid to employees of FGIS for work performed. Pay is based on the U.S. Office of Personnel Management pay rate tables. It may include night and Sunday differential costs.

Field Office administrative costs—the costs of management, support, and maintenance of a Field Office, including, but not limited to, the management and administrative support

personnel, rent, and utilities. This does not include any costs directly related to providing original or review inspection or weighing services.

Holiday—the legal public holidays specified in paragraph (a) of section 6103, title 5, of the United States Code (5 U.S.C. 6103(a)) and any other day declared to be a holiday by Federal statute or Executive order. Under section 6103(b) and Executive Order 10358 as amended, if the specified legal public holiday falls on a Saturday, the preceding Friday shall be considered to be the holiday, or if the specified legal public holiday falls on a Sunday, the following Monday shall be considered to be the holiday.

Hour—measure by which grading, certification, inspection, classification, laboratory, or other services cost is based and expenses are charged.

Indirect costs—the costs of FGIS activities that support the services provided to the industry and are not covered by FGIS tonnage fees.

National program administrative costs—the costs of national management and support of official grain inspection and/or weighing. This does not include the Field Office administrative costs and any costs directly related to providing service.

Operating reserve—the amount of funds the Service has available to provide official grain inspection and/or weighing services.

Operating costs—costs attributed to performing grading, inspection, certification, or laboratory services duties (i.e., training, equipment, local travel, and other such costs), plus operating reserve, plus indirect costs. This term is interchangeable with "Operating expenses".

Overtime—hours worked in excess of the approved schedule. Work performed after the first 8 hours per day or 40 hours per week is considered overtime.

Regular rate—the cost per hour for work provided in accordance with an applicant contract. Under Federal labor laws, this rate applies to the first 8 hours per day, or first 40 hours worked per week by AMS employees.

Unit—any measurement that there is one of. For example, one submitted sample, one barge, one aflatoxin test or one appeal inspection.

Formulas for the Regular Rate, Overtime Rate, and Holiday Rate

This proposed rulemaking would revise FGIS's regulations at 7 CFR 800.71 to implement a new formula for calculating user fees. FGIS would publish the specific inputs used to calculate service fees on its public website. FGIS would expect to

announce the actual annual fee rates in a **Federal Register** notice during the first quarter of each year and would also publish the fees on its website.

Salaries, hours, and most rates ¹ used in the formulas would be based on the prior fiscal year's actual costs and hours of service. FGIS would round the final rates to the nearest \$0.10. Currently, some fees are charged on a per unit basis and others are charged on a per hour basis. FGIS would continue to provide costs based on a per hour and per unit basis to maintain consistency.

FGIS proposes to establish the following formulas:

Regular rate—The total direct pay of FGIS personnel performing grading, weighing, laboratory services, and equipment testing divided by the total direct hours for the previous year, which is then multiplied by the next year's percentage of cost-of-living increase, plus the benefits rate, plus the operating rate, plus the allowance for bad debt rate. If applicable, travel expenses would be added to the cost of providing the service through the operating rate or the travel would be billed separately. An example of the calculation would look like this: [Total direct pay divided by total direct hours (\$2,663,407/82,985) = \$32.10, multiplied by 1.7% (cost-of-living increase) = \$32.64, + \$10.04 (benefits rate) + \$28.90 (operating rate) + \$0.01 (bad debt allowance rate) = \$71.59 (rounded to \$71.60); rounding is done to the nearest \$0.10.]

Overtime rate—The total direct pay of FGIS personnel performing grading, weighing, laboratory services, and equipment testing divided by the total direct hours for the previous year, which is then multiplied by the next year's percentage of cost-of-living increase and then multiplied by 1.5, plus the benefits rate, plus the operating rate, plus the allowance for bad debt rate. If applicable, travel expenses would be added to the cost of providing the service through the operating rate or the travel would be billed separately. An example of the calculation would look like this: [Total direct pay divided by total direct hours (\$2,663,407/82,985) = \$32.10, multiplied by 1.7% (cost-of-living increase) = \$32.64, multiplied by 1.5 (overtime rate) = \$48.96 + \$10.04 (benefits rate) + \$28.90 (operating rate) + \$0.01 (bad debt allowance rate) = \$87.91 (rounded to \$87.90); rounding is done to the nearest \$0.10.]

Holiday rate—The total direct pay of FGIS personnel performing grading,

¹ Some rates, such as those for equipment use and specialist laboratory services, are based on unique cost components that are not accounted for in the prior fiscal year's obligations and service hours.

weighing, laboratory services, and equipment testing divided by the total direct hours for the previous year, which is then multiplied by the next year's percentage of cost-of-living increase and then multiplied by 2, plus the benefits rate, plus the operating rate, plus the allowance for bad debt rate. If applicable, travel expenses would be added to the cost of providing the service through the operating rate or the travel would be billed separately. An example of the calculation would look like this: [Total direct pay divided by total direct hours (\$2,663,407/82,985) = \$32.10, multiplied by 1.7% (cost-of-living increase) = \$32.64, multiplied by 2 (double time or Holiday rate) = \$65.28, + \$10.04 (benefits rate) + \$28.90 (operating rate) + \$0.01 (bad debt allowance rate) = \$104.23 (rounded to \$104.20); rounding is done to the nearest \$0.10.]

Formula calculations would be based on the prior fiscal year's actual costs or historical costs, workload data, projection of expenses impacting program costs, cost-of-living increases, and inflation. Cost-of-living increases and inflation factors would be based on economic assumptions from OMB. Rather than codifying a reference to an OMB budget document in the regulations, each year AMS would use the most recent economic factors released by OMB for budget development purposes to determine cost impacts for these user fee activities.

FGIS would continue to calculate adjusted fees for each calendar year and would publish a corresponding notice in the **Federal Register** and post the fees on its public website. The yearly notice would include a per-hour rate and, in some instances, the equivalent per-unit rate. The per-unit rate would be provided for functions that historically use a unit-cost basis for payment (*e.g.*, price per submitted sample). In those cases where a per-unit rate is necessary, the formulas would have an additional step to convert per-hour costs into a per-unit rate.

Formulas for the Benefits Rate, Operating Rate, and Allowance for Bad Debt Rate

FGIS would derive the components of the formulas above using the previous fiscal year's actual costs, as follows:

Benefits rate—The total direct benefits costs of FGIS personnel performing grading, weighing, laboratory services, and equipment testing divided by the total hours worked (regular, overtime, and holiday), which is then multiplied by the next calendar year's percentage cost-of-living increase. An example of the calculation would look like this

[Total direct benefits costs/(total regular hours + total overtime hours + total holiday hours) (\$819,207/82,985)] = \$9.87, multiplied by 1.7% (cost-of-living increase) = \$10.04.]

Operating rate—The total operating costs (including user fee adjustment) of FGIS personnel performing grading, weighing, laboratory services, and equipment testing divided by total hours worked (regular, overtime, and holiday), which is then multiplied by the percentage of inflation. The operating rate would include an adjustment for the operating reserve as an operating cost. For the purposes of this example, FGIS will call out the reserve adjustment separately. This example will assume \$1,000,000 is needed for the reserve and assume all other operating costs are \$42,000,000, divided by 630,000 total hours. An example of the calculation would look like this: [Total operating costs/(total regular hours + total overtime hours + total holiday hours) (\$42,000,000 + 1,000,000)/630,000 = \$69.61, multiplied by 2% (inflation) = \$69.62.]

Allowance for bad debt rate—Total bad debt for grading, weighing, laboratory services, and equipment testing divided by total hours worked (regular, overtime, and holiday). An example of the calculation would look like this: [Total bad debt cost/(total regular hours + total overtime hours + total holiday hours) (\$1,000/82,985) = \$0.01.]

As noted above, the proposed formulas reflect that the costs of providing services include both direct and indirect costs. Direct costs include the costs of salaries, employee benefits, and if applicable, travel and some operating costs. Indirect costs include the costs of program and AMS activities supporting the services provided to the industry and are not covered by FGIS tonnage fees. For purposes of these proposed formulas, indirect costs have been included as part of operating costs.

Conforming Regulatory Changes

In an interim rule published in the June 6, 2024, edition of the **Federal Register** (89 FR 48257), FGIS established revised fees for the remainder of 2024 (and until new fees are established pursuant to a final rule). To implement the revised fees, the interim rule imposed a stay on §§ 800.71 and 800.72(b). To amend these sections, if finalized, this rulemaking would first lift the stay imposed on them by the interim rule.

This proposed rulemaking also proposes to make certain conforming changes in 7 CFR part 800. Specifically, this proposal would restore references

to §§ 800.71 and 800.72 that were amended by the interim rule. In order to implement revised fees for 2024, the interim rule replaced references to § 800.71, which was stayed, with references to a newly added temporary section, § 800.74. Because § 800.72(b) was also stayed, the interim rule replaced a reference to that section in § 800.73(d) with a reference to §§ 800.72(a) and 800.74. As this rulemaking would revise § 800.71 to incorporate the proposed formulas, these internal substitutions would no longer be needed. Accordingly, if finalized, this proposed rulemaking would replace references to § 800.74 with references to § 800.71 in §§ 800.34, 800.36, 800.156(d)(5), and 800.197(b)(3). The proposal, if finalized, would also replace the reference to §§ 800.72(a) and 800.74 in § 800.73(d) with a reference to § 800.72. Finally, because the proposed changes to § 800.71 would render § 800.74 obsolete, this proposal also removes that section.

Technical Corrections

This proposed rulemaking would also correct two typographical errors—a reference to 5 U.S.C. 6103 and a reference to Executive Order 10358—in the definition of *Holiday* in 7 CFR 800.0—Meaning of terms. These corrections do not create new or amend existing requirements or interpretations.

Required Regulatory Analyses

Executive Orders 12866, 13563, and 14094

This proposed rulemaking is being issued in conformance with Executive Order 12866, “Regulatory Planning and Review,” Executive Order 13563, “Improving Regulation and Regulatory Review,” and Executive Order 14094, “Modernizing Regulatory Review.” Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, reducing costs, harmonizing rules, and promoting flexibility. Executive Order 14094 reaffirms, supplements, and updates Executive Order 12866 and further directs agencies to solicit and consider input from a wide range of affected and interested parties through a variety of means.

OMB has designated this proposed rulemaking as not significant under Executive Orders 12866, 13563, and 14094. Accordingly, OMB has not reviewed this proposed rule under those orders. Since grain export volume can vary significantly from year to year, estimating the impact of future fee changes can be difficult. FGIS recognizes the need to provide predictability to the industry for inspection and weighing fees. The statutory requirement to maintain an operating reserve between 3 to 6 months of operating expenses ensures that FGIS can adequately cover its costs without imposing an undue burden on its customers.

FGIS regularly reviews its user-fee financed programs to determine whether the fees charged for performing official inspection and weighing services adequately cover the costs of providing those services. Due to limitations in the current regulations (7 CFR 800.71(b)(3)), which permit fee increases of no more than 5 percent per year, combined with four years of rate decreases, and noneconomic factors that led to the 2020–2023 period having highest inflation in more than 40 years,² FGIS is now experiencing a deficit which is forecasted to grow without corrective action.

This proposed rule would revise the formulas under which FGIS adjusts fees annually to ensure stability of the program. The proposal would also ensure that FGIS complies with the USGSA, which requires the agency to charge fees sufficient to cover its costs and maintain a 3- to 6-month operating reserve. FGIS will continue to seek out cost-saving measures and implement appropriate changes to reduce its costs to provide alternatives to fee increases.

This proposed rulemaking is unlikely to have an annual effect of \$200 million or more or adversely affect the economy. FGIS has operated at a net loss for five consecutive years, and even with the maximum fee increases permitted under the current regulations, the agency has been unable to reduce the deficits and rebuild the operating reserve. While FGIS's interim final rule, published separately in the **Federal Register** (89 FR 48257), addresses the agency's current deficit, this proposed rulemaking seeks to prevent additional

deficits in future years by revising FGIS's user fee regulations to enable more accurate calculation of its costs and greater flexibility in future rate changes.

FGIS believes that the U.S. grain industry would be best served by revising the regulation at 7 CFR 800.71, which addresses the calculation of fees for official inspection and weighing services performed by FGIS in the U.S. and Canada. The industry is already familiar with the annual process for evaluating and updating fees and anticipates the changes in this proposal. This proposed rulemaking, if finalized, would allow FGIS to continue providing mandatory and voluntary grain inspection services that facilitate international and domestic trade. This proposal would also allow FGIS to adjust fees in the future in response to unforeseeable climate, logistical, and market conditions, and to maintain required operating reserves.

A 45-day comment period is provided to allow interested parties to submit written comments on this proposed rulemaking.

Initial Regulatory Flexibility Analysis

Under the requirements set forth in the Regulatory Flexibility Act (RFA) (5 U.S.C. 601–12), FGIS has considered the economic impact of this proposed rulemaking on small entities. Accordingly, FGIS has prepared this initial regulatory flexibility analysis. The purpose of the Regulatory Flexibility Act is to fit regulatory actions to the scale of businesses subject to such actions. This ensures that small businesses will not be unduly or disproportionately burdened.

The Small Business Administration (SBA) defines small businesses by their North American Industry Classification System Codes (NAICS). This proposed rulemaking would affect customers of FGIS's official inspection and weighing services in the domestic and export grain markets (NAICS code 115114). Current guidance from the SBA provides a revenue cutoff at \$34 million to differentiate large and small firms in this industry. Fees for the program which apply to this industry are provided on the FGIS website.

Under the USGSA, all grain exported from the United States must be officially inspected and weighed, with few exceptions. FGIS provides mandatory inspection and weighing services at 29 export facilities in the United States. Five delegated State agencies provide

mandatory inspection and weighing services at 20 facilities. All of these facilities are owned by multinational corporations, large cooperatives, or public entities that do not meet the requirements for small entities established by the SBA.

The USGSA requires the registration of all persons engaged in the business of buying grain for sale in foreign commerce. In addition, those persons who handle, weigh, or transport grain for sale in foreign commerce must also register. The regulations found at 7 CFR 800.30 and 800.31 define a foreign commerce grain business as the business of regularly buying, handling, weighing, or transporting grain for sale in foreign commerce totaling 15,000 metric tons or more during the preceding or current calendar year. Currently, there are 174 businesses registered to export grain, most of which are not small businesses.

Although most exporters are not small businesses, most users of FGIS's official inspection and weighing services (which include domestic grain businesses as well as exporters) meet the SBA requirements for small entities. Data on user fee receipts from FGIS for the past 5 years, plus 2024 to date, show a total of 2,123 different accounts over this time, though many firms are represented by multiple accounts. For the purpose of this initial regulatory flexibility analysis, FGIS will consider accounts as representing establishments, with multiple establishments associated with larger firms.

FGIS identified a total of 31 large firms, as defined by the SBA firm size classification of receipts in excess of \$34 million. FGIS also identified the total number of establishments affiliated with the 31 large firms to be 133. With a total number of establishments of 2,123, this means 1,990, or 94 percent, of the establishments that paid fees to FGIS over the 2019–2024 period are small businesses according to the SBA definition.

Table 2 shows that while only 6 percent of the firms are considered large, in total they have contributed the vast majority of the fees paid to the program. In each of the five previous years, and for the year 2024 to date, the 31 large firms paid between 86 and 90 percent of all FGIS fees, with an average of 89 percent. The remaining 1,990 establishments paid on average 11 percent of total fees.

² For example, the Consumer Price Index (CPI) Calculator (<https://data.bls.gov/cgi-bin/cpicalc.pl>) shows prices up 20 percent between January 2020 and February 2024, and up 31 percent between January 2016 and February 2024.

TABLE 2—FGIS BILLED ACCOUNTS SUMMARY TABLE FOR REGULATORY FLEXIBILITY ANALYSIS BY SMALL BUSINESS ADMINISTRATION SIZE CLASSIFICATION

Fiscal year	All firms	Large firms		Small firms	
	Total fees paid	Total fees paid	Share paid (%)	Total fees paid	Share paid (%)
2019	\$32,314,848	\$27,694,899	86	\$4,619,949	14
2020	30,746,015	27,386,467	89	3,359,547	11
2021	34,320,110	30,693,195	89	3,626,915	11
2022	31,663,547	28,183,027	89	3,480,520	11
2023	27,734,760	25,069,234	90	2,665,526	10
Oct 2023–Feb 2024	10,702,712	9,679,943	90	1,022,769	10
Grand Total	167,481,991	148,706,765	89	18,775,226	11

The proposed amendments to FGIS's user fee regulations would not change the relative burden of fees on small businesses. The provisions of this proposed rulemaking would apply equally to all entities. In addition, use of standardized user-fee rate calculations would benefit all inspection applicants, regardless of size, as fees would more closely reflect the current costs of inspections, and the fee calculation process would be more transparent. Through its annual review, FGIS would be able to monitor the financial status of the grain inspection and weighing program to determine whether further adjustments are necessary. Finally, this proposed rulemaking would not impose additional reporting, record keeping, or other compliance requirements on small entities. FGIS has not identified any other Federal rules which may duplicate, overlap, or conflict with this proposed rulemaking.

Executive Order 12988

This proposed rulemaking has been reviewed under Executive Order 12988—Civil Justice Reform. It is not intended to have retroactive effect. Section 18 of the USGSA (7 U.S.C. 87g) provides that no State or subdivision thereof may require or impose any requirements or restrictions concerning the inspection, weighing, or description of grain under the USGSA. Otherwise, this proposed rulemaking would not preempt any State or local laws, regulations, or policies unless they present an irreconcilable conflict with this proposed rulemaking. There are no administrative procedures that must be exhausted prior to any judicial challenge to the provisions of this proposed rulemaking.

Executive Order 13175

This proposed rulemaking has been reviewed under Executive Order 13175—Consultation and Coordination with Indian Tribal governments, which

requires agencies to consider whether their rulemaking actions would have Tribal implications. FGIS has determined that this proposed rulemaking is unlikely to have substantial direct effects on one or more Indian Tribes, on the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes.

Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801–808), the Office of Information and Regulatory Affairs designated this proposed rulemaking as not a major rule, as defined by 5 U.S.C. 804(2).

E-Government Act

USDA is committed to complying with the provisions of the E-Government Act (44 U.S.C. 3601–3616) by promoting the use of the internet and other information technologies to provide increased opportunities for citizen access to government information and services, and for other purposes.

Paperwork Reduction Act

This proposed rulemaking would not impose any additional reporting or recordkeeping requirements on either small or large FGIS customers. In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35), FGIS reports and forms are periodically reviewed to reduce information collection requirements and duplication.

List of Subjects in 7 CFR Part 800

Administrative practice and procedure, Conflict of interests, Exports, Freedom of information, Grains, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, the Agricultural Marketing

Service proposes to amend 7 CFR part 800 as follows:

PART 800—GENERAL REGULATIONS

- 1. The authority citation for part 800 continues to read as follows:

Authority: 7 U.S.C. 71–87K, 1621–1627.

§ 800.0 [Amended]

- 2. In § 800.0, in the definition of “Holiday”, remove the text “Under section 610 and Executive Order No. 10357” and add in its place the text “Under section 6103 and Executive Order No. 10358”.

§ 800.34 [Amended]

- 3. In § 800.34, in the first sentence, remove the citation “§ 800.74” and add in its place the citation “§ 800.71”.

§ 800.36 [Amended]

- 4. In § 800.36, the last sentence, remove the citation “§ 800.74” and add in its place the citation “§ 800.71”.
- 5. Lift the stay on § 800.71 and revise § 800.71 to read as follows:

§ 800.71 Fees assessed by the Service.

(a) *Official inspection and weighing services.* The fees described for Direct Service in paragraph (a)(1) of this section apply to official inspection and weighing services performed by the Service in the U.S. and Canada. The fees described for Supervision in paragraph (a)(2) of this section apply to official domestic inspection and weighing services performed by delegated States and designated agencies, including land carrier shipments to Canada and Mexico. The fees charged to delegated States by the Service are set forth in the State's Delegation of Authority document. Failure of a delegated State or designated agency to pay the appropriate fees to the Service within 30 days after becoming due will result in an automatic termination of the delegation or designation. The delegation or designation may be reinstated by the Service if fees that are

due, plus interest and any further expenses incurred by the Service because of the termination, are paid within 60 days of the termination.

(1) *Direct Service—Fees for official inspection and weighing services performed by the Service in the United States and Canada.* For each calendar year, the Service will calculate Direct Service fees as provided in paragraphs (b) and (c) of this section. The Service will publish a notice in the **Federal Register** and post Direct Service fees on its public website.

(2) *Supervision—Fees for supervision of official inspection and weighing services performed by delegated States and designated agencies in the United States.* The Service will assess a Supervision fee per metric ton of domestic U.S. grain shipments inspected or weighed, or both, including land carrier shipments to Canada and Mexico. For each calendar year, the Service will calculate Supervision fees as provided in paragraph (d) of this section. The Service will publish a notice in the **Federal Register** and post the Supervision fees on its public website.

(b) *Annual review of tonnage fees.* For each calendar year, the Service will review and adjust fees included in this section and publish fees each year according to the following:

(1) *Tonnage fees.* Tonnage fees for Direct Service in paragraph (a)(1) of this section will consist of the national tonnage fee and local tonnage fees and the Service will calculate and round the fee to the nearest \$0.001 per metric ton. All outbound grain officially inspected and/or weighed by the Field Offices will be assessed the national tonnage fee plus the appropriate local tonnage fee. Export grain officially inspected and/or weighed by delegated States and official agencies, excluding land carrier shipments to Canada and Mexico, will be assessed the national tonnage fee only. The fees will be set according to the following:

(i) *National tonnage fee.* The national tonnage fee is the national program administrative costs for the previous fiscal year divided by the average yearly tons of export grain officially inspected and/or weighed by delegated States and designated agencies, excluding land carrier shipments to Canada and Mexico, and outbound grain officially inspected and/or weighed by the Service during the previous 5 fiscal years.

(ii) *Local tonnage fee.* The local tonnage fee is the Field Office administrative costs for the previous fiscal year divided by the average yearly tons of outbound grain officially

inspected and/or weighed by the Field Office during the previous 5 fiscal years. The local tonnage fee is calculated individually for each Field Office.

(c) *Annual review of hourly and unit fees.* The Service will calculate the rate for program services, per hour per program employee using the following formulas:

(1) *Regular rate.* The total direct pay of program personnel performing grading, weighing, laboratory services, and equipment testing divided by the total direct hours for the previous year, which is then multiplied by the next year's percentage of cost-of-living increase, plus the benefits rate, plus the operating rate, plus the allowance for bad debt rate. If applicable, travel expenses will be added to the cost of providing the service through the operating rate or the travel will be billed separately.

(2) *Overtime rate.* The total direct pay of program personnel performing grading, weighing, laboratory services, and equipment testing divided by the total direct hours for the previous year, which is then multiplied by the next year's percentage of cost-of-living increase and then multiplied by 1.5, plus the benefits rate, plus the operating rate, plus the allowance for bad debt rate. If applicable, travel expenses will be added to the cost of providing the service through the operating rate or the travel will be billed separately.

(3) *Holiday rate.* The total direct pay of program personnel performing grading, weighing, laboratory services, and equipment testing divided by the total direct hours for the previous year, which is then multiplied by the next year's percentage of cost-of-living increase and then multiplied by 2, plus the benefits rate, plus the operating rate, plus the allowance for bad debt rate. If applicable, travel expenses will be added to the cost of providing the service through the operating rate or the travel will be billed separately.

(4) *Benefits rate, operating rate, and allowance for bad debt rate.* For each calendar year, based on previous fiscal year costs, the Service will calculate the benefits rate, operating rate, and allowance for bad debt rate as follows:

(i) *Benefits rate.* The total direct benefits costs of program personnel performing grading, weighing, laboratory services, and equipment testing divided by the total hours (regular, overtime, and holiday) worked, which is then multiplied by the next calendar year's percentage cost-of-living increase.

(ii) *Operating rate.* The total operating costs of program personnel performing grading, weighing, laboratory services,

and equipment testing divided by total hours (regular, overtime, and holiday) worked, which is then multiplied by the percentage of inflation.

(iii) *Allowance for bad debt rate.* The total allowance for bad debt for personnel performing grading, weighing, laboratory services, and equipment testing divided by total hours (regular, overtime, and holiday) worked.

(5) *Cost of living and inflation factors.* The Service will use the most recent economic factors released by the Office of Management and Budget for budget development purposes to derive the cost-of-living expenses and percentage of inflation factors used in the formulas in this section.

(6) *Operating reserve adjustment.* The Service will review the operating reserve at the end of each fiscal year and adjust the fees as needed to ensure an operating reserve of 3 to 6 months of expenses. This adjustment is included in the calculation for operating cost.

(d) *Annual review of supervision fees.* Fees for Supervision in paragraph (a)(2) of this section will be set according to the following:

(1) *Supervision tonnage fee.* The supervision tonnage fee is the sum of the prior fiscal year program costs plus an operating reserve adjustment divided by the average yearly tons of domestic U.S. grain shipments inspected or weighed, or both, including land carrier shipments to Canada and Mexico during the previous 5 fiscal years. If the calculated value is zero or a negative value, the Service will suspend the collection of supervision tonnage fees for 1 calendar year.

(2) *Operating reserve adjustment.* The operating reserve adjustment is the supervision program costs for the previous fiscal year divided by 2, less the end of previous fiscal year operating reserve balance.

(e) *Periodic review.* The Service will periodically review and adjust all Direct Service and Supervision fees in paragraphs (a)(1) and (2) of this section, respectively, as necessary to ensure they reflect the true cost of providing and supervising official service. This process will incorporate any fee adjustments from paragraphs (b) through (d) of this section.

(f) *Miscellaneous fees for other services.* For each calendar year, the Service will review fees included in this section and publish fees in the **Federal Register** and on its public website.

(1) *Registration certificates and renewals.* The fee for registration certificates and renewals will be published annually in the **Federal Register** and on the Service's public

website, and the Service will calculate the fee using the noncontract hourly rate published pursuant to paragraph (a)(1) of this section multiplied by 5. If you operate a business that buys, handles, weighs, or transports grain for sale in foreign commerce, or you are in a control relationship with respect to a business that buys, handles, weighs, or transports grain for sale in interstate commerce, you must complete an application and pay the published fee.

(2) *Designation amendments.* The fee for amending designations will be published annually in the **Federal Register** and on the Service's public website. The Service will calculate the fee using the cost of publication plus 1 hour at the noncontract hourly rate. If submitting an application to amend a designation, the published fee must be paid.

■ 6. In § 800.72:

- a. Lift the stay on paragraph (b); and
- b. Revise paragraph (b).

The revision reads as follows:

§ 800.72 Explanation of additional service fees for services performed in the United States only.

* * * * *

(b) In addition to a 2-hour minimum charge for service on Saturdays, Sundays, and holidays, an additional charge will be assessed when the revenue from the services in § 800.71(a)(1) does not equal or exceed what would have been collected at the applicable hourly rate. The additional charge will be the difference between the actual unit fee revenue and the hourly fee revenue. Hours accrued for travel and standby time shall apply in determining the hours for the minimum fee.

§ 800.73 [Amended]

- 7. In § 800.73, in paragraph (d), in the second sentence remove the citation “§§ 800.72(a) and 800.74” and add in its place the citation “§ 800.72”.

§ 800.74 [Removed]

- 8. Remove § 800.74.

§ 800.156 [Amended]

- 9. In § 800.156, in paragraph (d)(5), in the last sentence remove the citation “§ 800.74” and add in its place the citation “§ 800.71”.

§ 800.197 [Amended]

- 10. In § 800.197, in paragraph (b)(3), remove the citation “§ 800.74” and add in its place the citation “§ 800.71”.

Melissa Bailey,

Associate Administrator, Agricultural Marketing Service.

[FR Doc. 2024–23192 Filed 10–7–24; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2024–2327; Project Identifier MCAI–2024–00233–T]

RIN 2120–AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Airbus SAS Model A319–111, 112, –113, –114, –115, –131, –132, and –133 airplanes; A320–211, –212, –214, –216, –231, –232, and –233 airplanes; and A321–111, –112, –131, –211, –212, –213, –231, and –232 airplanes. This proposed AD was prompted by a full-scale fatigue test that found cracks on the main landing gear (MLG) bay rear skin panel at the stringer run-out at Frame 46 and Stringer 32 on the left-hand and right-hand sides. This proposed AD would require repetitive special detailed inspections (SDIs) of the affected area for cracking and applicable corrective actions, as specified in a European Union Aviation Safety Agency (EASA) AD, which is proposed for incorporation by reference (IBR). The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by November 22, 2024.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *regulations.gov*. Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA–2024–2327; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory

continuing airworthiness information (CAI), any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

- For EASA material identified in this proposed AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu*; website *easa.europa.eu*. You may find this material on the EASA website at *ad.easa.europa.eu*. It is also available at *regulations.gov* under Docket No. FAA–2024–2327.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

FOR FURTHER INFORMATION CONTACT: Tim Dowling, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206–231–3667; email: *timothy.p.dowling@faa.gov*.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the **ADDRESSES** section. Include “Docket No. FAA–2024–2327; Project Identifier MCAI–2024–00233–T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to *regulations.gov*, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as

private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Tim Dowling, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206–231–3667; email: timothy.p.dowling@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2024–0089, dated April 15, 2024 (EASA AD 2024–0089) (also referred to as the MCAI), to correct an unsafe condition for certain Airbus SAS Model A319–111, –112, –113, –114, –115, –131, –132, and –133 airplanes; A320–211, –212, –214, –215, –216, –231, –232, and –233 airplanes; and A321–111, –112, –131, –211, –212, –213, –231, and –232 airplanes. Model A320–215 airplanes are not certificated by the FAA and are not included on the U.S. type certificate data sheet; this AD therefore does not include those airplanes in the applicability. The MCAI states that cracks were found on the MLG bay rear skin panel at stringer run-out at Frame 46 and Stringer 32 on the left-hand and right-hand sides during a full-scale fatigue test. This condition, if not detected and corrected, could lead to crack propagation, possibly resulting

in reduced structural integrity of the airplane. The FAA is proposing this AD to address the unsafe condition on these products. You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA–2024–2327.

Material Incorporated by Reference Under 1 CFR Part 51

EASA AD 2024–0089 specifies procedures for repetitive SDIs of the MLG bay rear skin panel at the stringer run-out at Frame 46 and Stringer 32 on the left-hand and right-hand sides. Corrective actions include crack repair. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA’s Determination

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements in This NPRM

This proposed AD would require accomplishing the actions specified in EASA AD 2024–0089 described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

Explanation of Required Compliance Information

In the FAA’s ongoing efforts to improve the efficiency of the AD process, the FAA developed a process to use some civil aviation authority (CAA) ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has been coordinating this process with manufacturers and CAAs. As a result, the FAA proposes to incorporate EASA AD 2024–0089 by reference in the FAA final rule. This proposed AD would, therefore, require compliance with EASA AD 2024–0089 in its entirety through that incorporation, except for any differences identified as exceptions in the regulatory text of this proposed AD. Using common terms that are the same as the heading of a particular section in EASA AD 2024–0089 does not mean that operators need comply only with that section. For example, where the AD requirement refers to “all required actions and compliance times,” compliance with this AD requirement is not limited to the section titled “Required Action(s) and Compliance Time(s)” in EASA AD 2024–0089. Material required by EASA AD 2024–0089 for compliance will be available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA–2024–2327 after the FAA final rule is published.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 1,857 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
3 work-hours × \$85 per hour = \$255 per inspection cycle	\$0	\$255 per inspection cycle	\$473,535 per inspection cycle.

The FAA has received no definitive data on which to base the cost estimates for the on-condition actions specified in this proposed AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority. The FAA is issuing this rulemaking under the authority described in

Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. For the reasons discussed above, I certify this proposed regulation: (1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and
(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Airbus SAS: Docket No. FAA–2024–2327; Project Identifier MCAI–2024–00233–T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by November 22, 2024.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus SAS Model airplanes specified in paragraphs (c)(1) through (3) of this AD, certificated in any category, as identified in European Union Aviation Safety Agency (EASA) AD 2024–0089, dated April 15, 2024 (EASA AD 2024–0089).

(1) Model A319–111, –112, –113, –114, –115, –131, –132, and –133 airplanes.

(2) Model A320–211, –212, –214, –216, –231, –232, and –233 airplanes.

(3) Model A321–111, –112, –131, –211, –212, –213, –231, and –232 airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by a full-scale fatigue test that found cracks on the main landing gear (MLG) bay rear skin panel at stringer run-out at Frame 46 and Stringer 32 on the left-hand and right-hand sides. The FAA is issuing this AD to detect potential fatigue cracking on the MLG bay rear skin panel at the stringer run-out at Frame 46 and Stringer 32 on the left-hand and right-hand sides. The unsafe condition, if not addressed, could lead to crack propagation, possibly resulting in reduced structural integrity of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraphs (h) and (i) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, EASA AD 2024–0089.

(h) Exceptions to EASA AD 2024–0089

(1) Where EASA AD 2024–0089 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where paragraph (2) of EASA AD 2024–0089 specifies “If, during any inspection as required by paragraph (1) of this AD, discrepancies are detected, as defined in the SB, before next flight, contact Airbus for approved repair instructions and accomplish those instructions accordingly,” this AD requires replacing that text with “If, during any inspection as required by paragraph (1) of this AD, any cracking is found, before next flight, repair the cracking using a method approved by the Manager, International Validation Branch, FAA; or EASA; or Airbus SAS’s EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.”

(3) This AD does not adopt the “Remarks” section of EASA AD 2024–0089.

(i) No Reporting Requirement

Although the material referenced in EASA AD 2024–0089 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD and email to: AMOC@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or EASA; or Airbus SAS’s EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC):* Except as required by paragraph (j)(2) of this AD, if any material contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified

as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(k) Additional Information

For more information about this AD, contact Tim Dowling, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206–231–3667; email: timothy.p.dowling@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2024–0089, dated April 15, 2024.

(ii) [Reserved]

(3) For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; website easa.europa.eu. You may find this material on the EASA website at ad.easa.europa.eu.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on October 1, 2024.

Peter A. White,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[FR Doc. 2024–23038 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 71**

**Docket No. FAA–2024–2348; Airspace
Docket No. 23–AAL–53**

RIN 2120–AA66

**Revocation of Alaskan Very High
Frequency Omnidirectional Range
Federal Airway V–414 and Amendment
of United States Area Navigation
Routes T–248 and T–250 in Alaska**

AGENCY: Federal Aviation
Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking
(NPRM).

SUMMARY: This action proposes to
revoke Alaskan Very High Frequency
Omnidirectional Range (VOR) Federal
Airway V–414 and amend United States
Area Navigation (RNAV) Routes T–248
and T–250 in Alaska. These proposed
actions are due to the decommissioning
of the Gambell Nondirectional Radio
Beacon (NDB) in Alaska.

DATES: Comments must be received on
or before November 22, 2024.

ADDRESSES: Send comments identified
by FAA Docket No. FAA–2024–2348
and Airspace Docket No. 23–AAL–53
using any of the following methods:

* *Federal eRulemaking Portal:* Go to
www.regulations.gov and follow the
online instructions for sending your
comments electronically.

* *Mail:* Send comments to Docket
Operations, M–30; U.S. Department of
Transportation, 1200 New Jersey
Avenue SE, Room W12–140, West
Building Ground Floor, Washington, DC
20590–0001.

* *Hand Delivery or Courier:* Take
comments to Docket Operations in
Room W12–140 of the West Building
Ground Floor at 1200 New Jersey
Avenue SE, Washington, DC, between 9
a.m. and 5 p.m., Monday through
Friday, except Federal holidays.

* *Fax:* Fax comments to Docket
Operations at (202) 493–2251.

Docket: Background documents or
comments received may be read at
www.regulations.gov at any time.
Follow the online instructions for
accessing the docket or go to the Docket
Operations in Room W12–140 of the
West Building Ground Floor at 1200
New Jersey Avenue SE, Washington,
DC, between 9 a.m. and 5 p.m., Monday
through Friday, except Federal holidays.

FAA Order JO 7400.11J, Airspace
Designations and Reporting Points, and
subsequent amendments can be viewed
online at www.faa.gov/air_traffic/

publications/. You may also contact the
Rules and Regulations Group, Office of
Policy, Federal Aviation
Administration, 600 Independence
Avenue SW, Washington, DC 20597;
telephone: (202) 267–8783.

FOR FURTHER INFORMATION CONTACT:

Steven Roff, Rules and Regulations
Group, Office of Policy, Federal
Aviation Administration, 600
Independence Avenue SW, Washington,
DC 20597; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The FAA's authority to issue rules
regarding aviation safety is found in
Title 49 of the United States Code.
Subtitle I, Section 106 describes the
authority of the FAA Administrator.
Subtitle VII, Aviation Programs,
describes in more detail the scope of the
agency's authority. This rulemaking is
promulgated under the authority
described in Subtitle VII, Part A,
Subpart I, Section 40103. Under that
section, the FAA is charged with
prescribing regulations to assign the use
of the airspace necessary to ensure the
safety of aircraft and the efficient use of
airspace. This regulation is within the
scope of that authority as it would
modify the airway structure as
necessary to preserve the safe and
efficient flow of air traffic within the
National Airspace System.

Comments Invited

The FAA invites interested persons to
participate in this rulemaking by
submitting written comments, data, or
views. Comments are specifically
invited on the overall regulatory,
aeronautical, economic, environmental,
and energy-related aspects of the
proposal. The most helpful comments
reference a specific portion of the
proposal, explain the reason for any
recommended change, and include
supporting data. To ensure the docket
does not contain duplicate comments,
commenters should submit only one
time if comments are filed
electronically, or commenters should
send only one copy of written
comments if comments are filed in
writing.

The FAA will file in the docket all
comments it receives, as well as a report
summarizing each substantive public
contact with FAA personnel concerning
this proposed rulemaking. Before acting
on this proposal, the FAA will consider
all comments it receives on or before the
closing date for comments. The FAA
will consider comments filed after the
comment period has closed if it is
possible to do so without incurring

expense or delay. The FAA may change
this proposal in light of the comments
it receives.

Privacy: In accordance with 5 U.S.C.
553(c), DOT solicits comments from the
public to better inform its rulemaking
process. DOT posts these comments,
without edit, including any personal
information the commenter provides, to
www.regulations.gov, as described in
the system of records notice (DOT/ALL–
14 FDMS), which can be reviewed at
www.dot.gov/privacy.

Availability of Rulemaking Documents

An electronic copy of this document
may be downloaded through the
internet at www.regulations.gov.
Recently published rulemaking
documents can also be accessed through
the FAA's web page at [www.faa.gov/air_](http://www.faa.gov/air_traffic/publications/airspace_amendments/)
[traffic/publications/airspace_](http://www.faa.gov/air_traffic/publications/airspace_)
[amendments/](http://www.faa.gov/air_traffic/publications/airspace_).

You may review the public docket
containing the proposal, any comments
received and any final disposition in
person in the Dockets Operations office
(see **ADDRESSES** section for address,
phone number, and hours of
operations). An informal docket may
also be examined during normal
business hours at the office of the
Western Service Center, Federal
Aviation Administration, 2200 South
216th St., Des Moines, WA 98198.

Incorporation by Reference

Alaskan VOR Federal Airways are
published in paragraph 6010(b) and
United States RNAV Routes are
published in paragraph 6011 of FAA
Order JO 7400.11, Airspace
Designations and Reporting Points,
which is incorporated by reference in 14
CFR 71.1 on an annual basis. This
document proposes to amend the
current version of that order, FAA Order
JO 7400.11J, dated July 31, 2024, and
effective September 15, 2024. These
updates would be published in the next
update to FAA Order JO 7400.11. That
order is publicly available as listed in
the **ADDRESSES** section of this document.

FAA Order JO 7400.11J lists Class A,
B, C, D, and E airspace areas, air traffic
service routes, and reporting points.

Background

In 2003, Congress enacted the Vision
100-Century of Aviation
Reauthorization Act (Pub. L. 108–176),
which established a joint planning and
development office in the FAA to
manage the work related to the Next
Generation Air Transportation System
(NextGen). Today, NextGen is an
ongoing FAA-led modernization of the
nation's air transportation system to

make flying safer, more efficient, and more predictable.

In support of NextGen, this proposal is part of an ongoing, large, and comprehensive airway modernization project in the state of Alaska. Part of this project is to transition the Alaskan en route navigation structure away from dependency on Nondirectional Radio Beacons (NDB) and move to develop and improve the RNAV route structure. The FAA is planning to decommission the Gambell NDB in the state of Alaska. As a result, Alaskan VOR Federal Airway V-414 will become unusable. Additionally, a portion of RNAV route T-248 will also become unusable.

The FAA plans to replace the Gambell NDB with a new waypoint (WP) FOXNO. The FAA proposes to revoke Alaskan Federal Airway V-414 in its entirety due to the decommissioning of the Gambell NDB. The loss of this airway will be mitigated by amending T-250 to extend beyond its current western terminus by adding the new FOXNO WP and the Kukuliak, AK, (VOR/distance measuring equipment (VOR/DME) to the airway description.

The Proposal

The FAA is proposing an amendment to 14 CFR part 71 by revoking Alaskan VOR Federal Airway V-414 and amending RNAV Routes T-248 and T-25. These proposed actions are due to the decommissioning of the Gambell Nondirectional Radio Beacon (NDB) in Alaska.

V-414: V-414 currently extends between the Gambell, AK, NDB and the Kukuliak, AK, VOR/DME. The FAA proposes to revoke V-414 in its entirety.

T-248: T-248 currently extends between the Gambell, AK, NDB and the

Emmonak, AK, VOR/DME. The FAA proposes to replace the Gambell NDB with the FOXNO, AK, WP. As amended, T-248 would extend between the FOXNO WP and the Emmonak VOR/DME.

T-250: T-250 currently extends between the Kukuliak, AK, VOR/DME and the Bethel, AK, Very High Frequency Omnidirectional Range/Tactical Air Navigation (VORTAC). The FAA proposes to extend the route westward by adding the WP FOXNO to the route description. As amended, T-250 would extend between the FOXNO WP and the Bethel VORTAC.

Regulatory Notices and Analyses

The FAA has determined that this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore: (1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this proposed rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

This proposal will be subject to an environmental analysis in accordance with FAA Order 1050.1F,

“Environmental Impacts: Policies and Procedures” prior to any FAA final regulatory action.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for 14 CFR part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order JO 7400.11J, Airspace Designations and Reporting Points, dated July 31, 2024, and effective September 15, 2024, is amended as follows:

Paragraph 6010(b) Alaskan VOR Federal Airways.

* * * * *

V-414 [Removed]

* * * * *

Paragraph 6011 United States Area Navigation Routes.

* * * * *

T-248 FOXNO, AK to Emmonak, AK (ENM) [Amended]

FOXNO, AK	WP	(Lat. 63°46′54.75″ N, long. 171°44′12.40″ W)
QAYAQ, AK	WP	(Lat. 63°52′14.00″ N, long. 169°59′42.00″ W)
Emmonak, AK (ENM)	VOR/DME	(Lat. 62°47′04.52″ N, long. 164°29′15.12″ W)

* * * * *

T-250 FOXNO, AK to Bethel, AK (BET) [Amended]

FOXNO, AK	WP	(Lat. 63°46′54.75″ N, long. 171°44′12.40″ W)
Kukuliak, AK (ULL)	VOR/DME	(Lat. 63°41′32.39″ N, long. 170°28′11.65″ W)
QAYAQ, AK	WP	(Lat. 63°52′14.00″ N, long. 169°59′42.00″ W)
BANAT, AK	WP	(Lat. 62°12′48.58″ N, long. 165°40′00.61″ W)
Bethel, AK (BET)	VORTAC	(Lat. 60°47′05.41″ N, long. 161°49′27.59″ W)

* * * * *

Issued in Washington, DC, on October 2, 2024.

Frank Lias,

Manager, Rules and Regulations Group.

[FR Doc. 2024–23204 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 71****Docket No. FAA–2024–2361 Airspace****Docket No. 22–AAL–83****RIN 2120–AA66****Amendment of Alaskan Very High Frequency Omnidirectional Range Federal Airway V–350 in Alaska****AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to amend Alaskan Very High Frequency Omnidirectional Range (VOR) Federal Airway V–350 in Alaska. This proposed action is due to the decommissioning of the Togiak Nondirectional Radio Beacon (NDB) in Alaska.

DATES: Comments must be received on or before November 22, 2024

ADDRESSES: Send comments identified by FAA Docket No. FAA–2024–2361 and Airspace Docket No. 22–AAL–83 using any of the following methods:

* *Federal eRulemaking Portal:* Go to www.regulations.gov and follow the online instructions for sending your comments electronically.

* *Mail:* Send comments to Docket Operations, M–30; U.S. Department of Transportation, 1200 New Jersey Avenue SE, Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.

* *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

* *Fax:* Fax comments to Docket Operations at (202) 493–2251.

Docket: Background documents or comments received may be read at www.regulations.gov at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FAA Order JO 7400.11J, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at www.faa.gov/air_traffic/publications/. You may also contact the Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 600 Independence

Avenue SW, Washington, DC 20597; telephone: (202) 267–8783.

FOR FURTHER INFORMATION CONTACT: Steven Roff, Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 600 Independence Avenue SW, Washington, DC 20597; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:**Authority for This Rulemaking**

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it would modify the airway structure as necessary to preserve the safe and efficient flow of air traffic within the National Airspace System.

Comments Invited

The FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should submit only one time if comments are filed electronically, or commenters should send only one copy of written comments if comments are filed in writing.

The FAA will file in the docket all comments it receives, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, the FAA will consider all comments it receives on or before the closing date for comments. The FAA will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. The FAA may change this proposal in light of the comments it receives.

Privacy: In accordance with 5 U.S.C. 553(c), DOT solicits comments from the

public to better inform its rulemaking process. DOT posts these comments, without edit, including any personal information the commenter provides, to www.regulations.gov, as described in the system of records notice (DOT/ALL–14 FDMS), which can be reviewed at www.dot.gov/privacy.

Availability of Rulemaking Documents

An electronic copy of this document may be downloaded through the internet at www.regulations.gov. Recently published rulemaking documents can also be accessed through the FAA's web page at www.faa.gov/air_traffic/publications/airspace_amendments/.

You may review the public docket containing the proposal, any comments received and any final disposition in person in the Dockets Operations office (see **ADDRESSES** section for address, phone number, and hours of operations). An informal docket may also be examined during normal business hours at the office of the Western Service Center, Federal Aviation Administration, 2200 South 216th St., Des Moines, WA 98198.

Incorporation by Reference

Alaskan VOR Federal Airways are published in paragraph 6010(b) of FAA Order JO 7400.11, Airspace Designations and Reporting Points, which is incorporated by reference in 14 CFR 71.1 on an annual basis. This document proposes to amend the current version of that order, FAA Order JO 7400.11J, dated July 31, 2024, and effective September 15, 2024. These updates would be published in the next update to FAA Order JO 7400.11. That order is publicly available as listed in the **ADDRESSES** section of this document.

FAA Order JO 7400.11J lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

Background

In 2003, Congress enacted the Vision 100-Century of Aviation Reauthorization Act (Pub L., 108–176), which established a joint planning and development office in the FAA to manage the work related to the Next Generation Air Transportation System (NextGen). Today, NextGen is an ongoing FAA-led modernization of the nation's air transportation system to make flying safer, more efficient, and more predictable.

In support of NextGen, this proposal is part of an ongoing, large, and comprehensive airway modernization project in the state of Alaska. Part of this project is to transition the Alaskan en route navigation structure away from

dependency on Nondirectional Radio Beacons (NDB) and move to develop and improve the RNAV route structure. The FAA is planning to decommission the Togiak NDB in the state of Alaska. As a result, the segment of V-350 that extends between the Dillingham, AK, VOR and the Bethel, AK, Very High Frequency Omnidirectional Range/Tactical Air Navigation (VORTAC) will become unusable. The loss of this segment is mitigated by Alaskan VOR Federal Airway V-453.

The Proposal

The FAA is proposing an amendment to 14 CFR part 71 to by amending Alaskan VOR Federal Airway V-350 in Alaska. This proposed action is due to the decommissioning of the Togiak NDB in Alaska.

V-350: V-350 currently extends between the Dillingham, AK, VOR, Togiak, AK, NDB, Bethel, AK, VORTAC, Emmonak, AK, VOR/Distance Measuring Equipment (VOR/DME) and the Nome, AK, VOR/DME. Due to the decommissioning of the Togiak NDB, the segment of V-350 that extends between the Dillingham VOR and the Bethel VORTAC will become unusable. As amended, V-350 would extend between the Bethel VORTAC, Emmonak VOR/DME and the Nome VOR/DME.

Regulatory Notices and Analyses

The FAA has determined that this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore: (1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this proposed rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

This proposal will be subject to an environmental analysis in accordance with FAA Order 1050.1F, “Environmental Impacts: Policies and Procedures” prior to any FAA final regulatory action.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

- 1. The authority citation for 14 CFR part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

- 2. The incorporation by reference in 14 CFR 71.1 of FAA Order JO 7400.11J, Airspace Designations and Reporting Points, dated July 31, 2024, and effective September 15, 2024, is amended as follows:

Paragraph 6010(b) Alaskan VOR Federal Airways.

* * * * *

V-350 [Amended]

From Bethel, AK; Emmonak, AK; to Nome, AK.

* * * * *

Issued in Washington, DC, on October 2, 2024.

Frank Lias,

Manager, Rules and Regulations Group.

[FR Doc. 2024–23205 Filed 10–7–24; 8:45 am]

BILLING CODE 4910–13–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA–R05–OAR–2023–0498; FRL–12265–01–R5]

Air Plan Approval; Illinois; Alton Township 2010 Sulfur Dioxide Redesignation and Maintenance Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to redesignate the Alton Township nonattainment area in Madison County, Illinois to attainment for the 2010 sulfur dioxide (SO₂) National Ambient Air Quality Standard (NAAQS). EPA is also proposing to approve Illinois’ maintenance plan for the area. Illinois

submitted the request for approval on October 2, 2023. Additionally, EPA is proposing to determine the Alton Township area attained the 2010 SO₂ NAAQS by the September 12, 2021, attainment date, fulfilling EPA’s obligation under the Clean Air Act (CAA) to determine whether the area attained the relevant NAAQS standard within six months of the attainment date.

DATES: Comments must be received on or before November 7, 2024.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R05–OAR–2023–0498 at <https://www.regulations.gov>, or via email to arra.sarah@epa.gov. For comments submitted at *Regulations.gov*, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from the docket. EPA may publish any comment received to its public docket. Do not submit to EPA’s docket at <https://www.regulations.gov> any information you consider to be Confidential Business Information (CBI), Proprietary Business Information (PBI), or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.* on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI, PBI, or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION CONTACT: Cecilia Magos, Air and Radiation Division (AR18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886–7336, magos.cecilia@epa.gov. The EPA Region 5 office is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays.

SUPPLEMENTARY INFORMATION: Throughout this document whenever “we,” “us,” or “our” is used, we mean EPA.

I. Background and Redesignation Requirements

On June 22, 2010 (75 FR 35520), EPA revised the primary SO₂ NAAQS, establishing a new health-based 1-hour standard of 75 parts per billion (ppb). EPA promulgated designations for this standard in four rounds. On September 18, 2015, Illinois submitted its recommendations to EPA to designate certain areas of the State as part of the Round 2 designations. Illinois recommended a portion of southern Alton Township in Madison County be designated as nonattainment for the 2010 SO₂ NAAQS. EPA concurred with Illinois' analysis and published a final action designating the area as nonattainment for the 2010 SO₂ NAAQS effective September 12, 2016 (81 FR 45039).

Illinois submitted an attainment plan for the Alton Township nonattainment area on December 3, 2018. Under section 192(a) of the CAA, these plans are required to demonstrate that areas will attain the NAAQS as expeditiously as practicable, but no later than five years from the effective date of designation. The plan included modeling from emissions associated with the Alton Steel Inc. (Alton Steel) facility in Alton, Illinois, and emissions from the Ameren Missouri-Sioux Energy Center (Ameren-Sioux) power plant in Missouri, located about 13 kilometers west-northwest of the nonattainment area. The modeled emissions showed the nonattainment status of the area was mainly attributed to these two SO₂ sources. Unlike the Round 2 designations modeling, the Alton Township attainment demonstration did not include the Wood River Power Station among the sources modeled due to the retirement of the facility in June 2016 and its demolition in February 2021. On March 14, 2019, after Illinois' submission of the attainment plan, the Illinois Environmental Protection Agency issued Construction Permit #18020009 for the Alton Steel facility to operate a new ladle metallurgy facility (LMF) stack, removing the downfacing vents that were contributing to modeled nonattainment at the facility. EPA included additional dispersion modeling to supplement Illinois' attainment demonstration to demonstrate that the emission limits required by the Illinois SIP and submitted for EPA approval provide for modeled concentrations meeting the 2010 SO₂ NAAQS. EPA approved Illinois' attainment plan revision on February 21, 2023 (88 FR 10464). Additionally, under section 179(c)(1) of the CAA, EPA is required to determine

whether a nonattainment area attained a standard by the applicable attainment date based on the area's air quality as of the attainment date. EPA is to issue this determination within six months of the attainment date. Thus, EPA had a mandatory duty under CAA section 179(c) to determine by March 12, 2022, whether the Alton Township area attained by September 12, 2021. As an additional action, EPA is proposing to determine the Alton Township area did attain the 2010 SO₂ NAAQS by the attainment date of September 12, 2021.

On October 2, 2023, Illinois submitted a redesignation request and maintenance plan for the Alton Township nonattainment area for the 2010 SO₂ NAAQS. Additionally, on March 31, 2022, Missouri adopted into its SIP a Consent Agreement between the Missouri Department of Natural Resources' Air Pollution Control Program and Ameren-Sioux, APCP-2021-018. EPA approved the revision to incorporate the Ameren-Sioux Consent Agreement on November 16, 2022 (87 FR 68634), establishing an enforceable SO₂ emissions limit for two coal-fired boilers at the facility. See Appendix B of the State's submittal included in the public docket of this action—Ameren-Sioux Consent Agreement. The submitted redesignation request and maintenance plan includes the Construction Permit issued to Alton Steel and the Consent Agreement issued to Ameren-Sioux approved into the Missouri SIP (87 FR 68634, November 16, 2022) with accepted SO₂ emissions limits. While the Ameren-Sioux facility is not in the Alton Township nonattainment area, Illinois included this facility in their modeling due to its close proximity to the nonattainment area and high SO₂ emissions, using information provided by the Missouri Department of Natural Resources. EPA's supplemental modeling with the updated limit of 7,342 pounds per hour (lbs/hr) averaged over a 24-hour block period for the Ameren-Sioux facility outlined in the Consent Agreement, provided for attainment of the 2010 SO₂ NAAQS, and thus is included in Illinois' submittal.

Under section 107(d)(3)(E) of the CAA, EPA may not promulgate a redesignation of a nonattainment area (or portion thereof) unless:

1. EPA has determined that the area has attained the NAAQS;
2. EPA has fully approved the applicable implementation plan for the area under section 110(k) of the CAA;
3. EPA has determined that improvement in air quality is due to permanent and enforceable reductions in emissions resulting from

implementation of the applicable implementation plan and applicable Federal air pollution control regulations and other permanent and enforceable reductions;

4. EPA has fully approved a maintenance plan for the area under section 175A of the CAA; and

5. The State containing such area has met all requirements applicable to the area under section 110 of the CAA and part D.

II. Evaluation of Illinois' Redesignation Request and Maintenance Plan

On October 2, 2023, Illinois submitted a redesignation request for the Alton Township 2010 SO₂ nonattainment area to attainment and a SIP revision containing a maintenance plan for the area.

EPA's evaluation of Illinois' redesignation request and maintenance plan was based on consideration of the five redesignation criteria provided under CAA section 107(d)(3)(E).

Criteria (1)—The Alton Township SO₂ Nonattainment Area Has Attained the 2010 SO₂ NAAQS

In accordance with CAA section 107(d)(3)(E)(i), for redesignation of a nonattainment area to attainment, the CAA requires EPA to determine that the area has attained the applicable NAAQS. An area is attaining the 2010 SO₂ NAAQS at an ambient air quality monitoring site, in accordance with 40 CFR 50.17 and appendix T of part 50, when the three-year average of the annual (99th percentile) of the daily maximum 1-hour average concentrations is less than or equal to 75 ppb. As stated in EPA's April 23, 2014, "Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions" ("April 2014 SO₂ Guidance"), there are two components needed to support an attainment determination: (1) a review of representative air quality monitoring data located in the area of maximum concentration; and (2) a further analysis, where there are no monitors, using air quality dispersion modeling, which will generally be needed to estimate SO₂ concentrations throughout the nonattainment area to demonstrate that the entire area is attaining the applicable NAAQS, based on current actual emissions or the fully implemented control strategy.¹ The April 2014 SO₂ Guidance further states that dispersion modeling should be

¹ EPA's "Guidance for 1-Hour Sulfur Dioxide (SO₂) Nonattainment Area State Implementation Plans (SIP) Submissions" can be found at <https://www.epa.gov/so2-pollution/guidance-1-hour-sulfur-dioxide-so2-nonattainment-area-state-implementation-plans-sip>.

conducted to estimate SO₂ concentrations throughout the nonattainment area using actual emissions and meteorological information for the most recent 3 calendar years. EPA considered Illinois' modeling analyses submitted in the State's attainment plan which incorporated reductions in allowable emissions without the LMF stack changes to Alton Steel, which showed Alton Steel was the principal contributor to the highest modeled violations. Subsequently, EPA considered the modeling analyses with changes to the LMF exhaust configuration as described in Illinois' Construction Permit issued to Alton Steel. This analysis determined that after changes to the LMF exhaust stack in Alton Steel, the analysis still modeled violations of the 2010 SO₂ NAAQS that were primarily due to the Ameren-Sioux facility. New SO₂ emission limits were established under the Ameren-Sioux Consent Agreement (87 FR 68634, November 16, 2022), and EPA conducted supplementary modeling that incorporated both of these new limits and the changes to the LMF exhaust stack at Alton Steel. The supplementary modeling showed design values that are below the 2010 SO₂ NAAQS for the Alton Township area.

The April 2014 SO₂ Guidance provides an extensive discussion of EPA's view that appropriately set comparably stringent limits based on averaging times as long as 30 days can be found to provide for attainment of the 2010 SO₂ NAAQS. The April 2014 SO₂ Guidance also offers specific recommendations for determining an appropriate longer-term average limit. Illinois' plan applies 1-hour average emission limits to Alton Steel. However, Illinois' attainment plan also considers the impact of an additional facility, Ameren-Sioux, that is subject to a 24-hour block average limit. In response, EPA provided additional discussion of its rationale for approving the use of longer-term average limits in plans designed to provide for attainment. More detail on EPA's analysis of the attainment plan for the Alton Township area can be found in the attainment plan approval (88 FR 10464, February 21, 2023).

Under 40 CFR 50.17(b), the 2010 SO₂ NAAQS is met at an ambient air quality monitoring site when the three-year average of the annual (99th percentile) daily maximum 1-hour average concentrations is less than or equal to 75 ppb, as determined in accordance with appendix T of 40 CFR part 50, at all relevant monitoring sites in the subject area. In a year with 365 days of

valid monitoring data, the 99th percentile would be the fourth highest daily maximum 1-hour value. Attainment demonstrations for the 2010 SO₂ NAAQS should demonstrate future attainment and maintenance of the NAAQS in the entire area designated as nonattainment (*i.e.*, not just at the violating monitor) by using air quality dispersion modeling (*see* appendix W to 40 CFR part 51) to show that the mix of sources and enforceable control measures and emission rates in an identified area will not lead to a violation of the 2010 SO₂ NAAQS. Illinois' redesignation request for the Alton Township nonattainment area relied upon the demonstration of attainment based on air dispersion modeling, which Illinois submitted to EPA as part of its December 2018 attainment SIP submittal. For a short-term (*i.e.*, 1-hour) standard, dispersion modeling, using allowable emissions and addressing stationary sources in the affected area (and in some cases those sources located outside the nonattainment area which may affect attainment in the area), is technically appropriate, efficient, and effective in demonstrating attainment in nonattainment areas because it takes into consideration combinations of meteorological and emission source operating conditions that may contribute to peak ground-level concentrations of SO₂.

Preferred air quality models for use in regulatory applications are described in appendix A of EPA's *Guideline on Air Quality Models* (40 CFR part 51, appendix W). In 2005, EPA promulgated AERMOD as the Agency's preferred near-field dispersion modeling for a wide range of regulatory applications addressing stationary sources (for example, in estimating SO₂ concentrations) in all types of terrain based on extensive developmental and performance evaluation. To support the SIP for bringing the Alton area into attainment of the 2010 SO₂ NAAQS, EPA assisted Illinois by conducting a modeling demonstration of the Alton area with updated emissions data relied upon in the model and by correcting the source characterization. Because Illinois' submittal predated the updated SO₂ emissions limit at the Ameren-Sioux facility necessary to model attainment in the area, EPA updated the emissions data at Ameren-Sioux in the supplemental model and corrected any other deficiencies in the emissions data. Additional updates and modifications in EPA's modeling analysis included: updated AERMOD version from version 18081 to 21112 (the most recent

available version at the time), updated stack parameters to current operating conditions, and adjusted emission rates for the Ameren-Sioux facility to account for longer-term average limits. EPA used Illinois' receptor grid, meteorological surface and upper air stations, model settings, and some source parameters to develop the modeling demonstration. *See* Alton SO₂ Nonattainment Plan TSD, 87 FR 80509 (December 30, 2022). EPA used AERMOD version 21112, the most recent version of the AERMOD Modeling System available at the time, for the modeling analysis. In the time since the modeling was conducted by Illinois and later supplemented by EPA using AERMOD version 21112, EPA has released two AERMOD version updates. AERMOD 22112 was released in 2022 to replace the regulatory version 21112 and was a routine release that does not include any scientific updates to the regulatory formulation of AERMOD as described in appendix W.² In 2023, AERMOD 23132 replaced the regulatory version 22112 which included small bug fixes and enhancements.³ Currently, AERMOD 23132 is the most recent available version. However, EPA does not require Illinois to use the current AERMOD version as Illinois used the AERMOD version that was most recent at the time it was developing the SIP and determining SO₂ emission limits.

Illinois' modeled demonstration of attainment for the Alton Township area was discussed in detail in EPA's proposed approval of the Alton Township SO₂ attainment plan. *See* 87 FR 80509, (December 30, 2022). Illinois' original modeling submitted included Ameren-Sioux maximum allowable emissions and the reconfigured LMF stack emissions for Alton Steel, which yielded a maximum predicted 99th percentile 1-hour average concentration of 298.5 micrograms per cubic meter (µg/m³). EPA conducted a supplemental modeling run to evaluate the reconfigured stack requirements at Alton Steel in combination with Ameren-Sioux's updated 7,342 lbs SO₂/hr 24-hour block limit found in the Missouri SIP (87 FR 68634, November 16, 2022). EPA's modeling demonstrated that the Alton area showed a design value of 74.9 ppb (196.2 µg/m³) with the revised SO₂ emission limits that will provide for attainment based on the new requirements for Alton Steel and

² *See* AERMOD Modeling System Transmittal Memorandum (v22112) https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/AERMOD_22112_Transmittal_Memo.pdf.

³ *See* AERMOD Modeling System Transmittal Memorandum (v23132) https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/AERMOD_23132_Transmittal_Memo.pdf.

Ameren-Sioux, which are both permanently and federally enforceable. As mentioned above, the changes at the Alton Steel facility were construction changes to the LMF stack parameters to be completed by July 31, 2019, modifying the dispersion of emissions, and they did not alter existing operating emission limit conditions that the reconfigured LMF stack was already subject to and approved for in the approved attainment plan. Stack test results of the LMF at the Alton Steel facility prior to construction of the modified LMF stack show compliance with the permitted values, as do updated stack test results of the LMF stack upon construction completion as

shown in Table 1. EPA concluded that Illinois' modeling is a suitable demonstration that its requirements in the Construction Permit for Alton Steel and all other Illinois sources in the nonattainment area were properly addressed in the attainment plan. EPA's supplemental modeling demonstrated that the updated 24-hour block limit for Ameren-Sioux of 7,342 lbs/hr in combination with updated emissions at Alton Steel provide for attainment and is the primary basis to conclude that the area is attaining the 2010 SO₂ NAAQS.

EPA has also considered additional information which supports its proposed determination that the area has attained the NAAQS, including annual SO₂ emissions from the Alton

Steel facility shown in Table 2. The annual tons per year emissions at the Alton facility show a decreasing trend overall. Annual SO₂ emissions from the Ameren-Sioux facility found in Table 2 also show a decreasing trend overall. EPA included data from the Ameren-Sioux facility showing that hourly emissions with a 24-hour average, are at or below the newly established limit of 7,342 lbs/hr, and have been since 2017. These data are included in the docket of this action.⁴ In this action, EPA is proposing to find that the Alton Township area has attained and will continue to attain the 2010 SO₂ NAAQS with respect to the redesignation criteria under CAA section 107(d)(3)(E)(i).

TABLE 1—ALTON STEEL-LMF SO₂ EMISSION UNIT STACK TEST RESULTS FOR 2017 AND 2020

Permit limit	2017	2020	Units
0.10	>0.05	0.06	Lbs/ton.
11.20	>2.86	5.40	Lbs/hr.
37.50	>4.75	23.70	Ton/yr.

TABLE 2—FACILITY ANNUAL SO₂ EMISSIONS
[In tons]

	2016	2017	2018	2019	2020	2021	2022	2023
Alton Steel Inc	41.90	45.39	51.43	49.20	44.62	21.80	16.33	14.83
Ameren Sioux	3,182.70	2,722.27	2,276.18	2,119.18	1,199.51	1,972.73	1,676.36	901.89

Additionally, with respect to nonattainment area requirements under CAA section 179(c), EPA is proposing to determine the Alton Township area attained the 2010 SO₂ NAAQS by the area's attainment date of September 12, 2021. This is based on the information provided above, including the stack construction date in 2019 and emissions data shown to be below emission limits during and after the attainment period. Because this a separate CAA requirement, EPA may choose to finalize this determination separately, as this is not a redesignation criterion, but rather, just relying on the same set of facts.

Criteria (2) and Criteria (5)—Illinois Has Met All Applicable Requirements Under CAA Section 110 and Part D of the CAA, and EPA Has Fully Approved the Applicable Implementation Plan Under CAA Section 110(k)

For redesignating a nonattainment area to attainment under a NAAQS, a State must have met all applicable requirements (CAA section 107(d)(3)(E)(v)), and EPA must have

fully approved the applicable implementation plan (CAA section 107(d)(3)(E)(ii)). EPA's long-standing interpretation of the CAA is that not every requirement under CAA section 110 and part D are applicable for purposes of CAA section 107(d)(3)(E)(ii) and (v). The Agency's interpretation of the statute limiting evaluation of section 110 and part D requirements to only those that are applicable for purposes of redesignation was first articulated shortly after the passage of the 1990 CAA Amendments in Agency guidance documents, and has been consistently applied in notice-and-comment redesignation actions over the last three decades.

Many of the section 110 elements that are unrelated to an area's SO₂ attainment status are not applicable requirements for purposes of redesignation. The area will still be subject to these requirements after the area is redesignated to attainment of the 2010 SO₂ NAAQS. For example, the CAA section 110(a)(2)(D) interstate transport requirements for a State are not linked with a nonattainment area's

designation and classification in that State, and continue to apply to States regardless of the designation status of areas within that State. However, even though many of the section 110 requirements are not applicable for purposes of redesignation, EPA has in any case approved most elements of Illinois' section 110 infrastructure SIP. See infrastructure SIP approval, 79 FR 62042 (October 16, 2014); revisions to Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR) programs, 87 FR 20715 (April 8, 2022); State board requirements, 84 FR 49671 (September 23, 2019); and emission limits of pollutants relevant to the 2010 SO₂ NAAQS, 80 FR 29535 (May 22, 2015).

EPA also proposes to determine that Illinois has met and EPA has fully approved those part D requirements that are applicable for purposes of redesignation. Part D is comprised of the general nonattainment area plan requirements in subpart 1 (section 172) as well as pollutant specific subparts, including section 191 (or subpart 5), which applies to areas designated

⁴ See Ameren Sioux (MO) Facility Emissions Data 2016–2023.xlsx in the docket.

nonattainment for SO₂, nitrogen dioxide, or lead. While some nonattainment planning requirements are not applicable for purposes of CAA section 107(d)(3)(E)(ii) and (v) for areas that are attaining the NAAQS, Illinois has in any case submitted a complete attainment plan and EPA has fully approved that plan, including emissions inventories, Reasonably Available Control Technology/Reasonably Available Control Measures, Reasonable Further Progress (RFP), and contingency measures.

On February 21, 2023 (88 FR 10464), EPA approved Illinois' attainment SIP for the Alton Township area including the operation of a new LMF stack at Alton Steel and revised emission limits for Ameren-Sioux, which are the main SO₂ sources affecting the Alton Township area. In that action, EPA found that Illinois had satisfied requirements for providing for attainment of the 2010 SO₂ NAAQS in the Alton Township area. The adopted SO₂ SIP regulations for Alton Steel and Ameren-Sioux are contained in the Construction Permit for Alton Steel and the Ameren-Sioux Consent Agreement, respectively. Illinois has shown that it maintains an active enforcement program to ensure ongoing compliance with these requirements. Illinois' programs for NSR and PSD will address emissions from potential new sources in the area (57 FR 59928, December 17, 1992; 60 FR 49780, September 27, 1995; 68 FR 25504, May 13, 2003). Missouri also maintains an active enforcement program under the Revised Statutes of Missouri section 643.080 to ensure ongoing compliance.

In its attainment plan, Illinois chose 2017 for its base year emissions inventory as comprehensive data were available and updated that year, satisfying the requirements of section 172(c)(3) of the CAA. Illinois additionally examined whether any large sources beyond 10 kilometers of the nonattainment area might also have significant air quality impacts in the area, resulting in the addition of Ameren-Sioux to the inventory. Illinois' SO₂ emissions data identified Alton Steel and Ameren-Sioux as the main contributors to the nonattainment status for the Alton Township area.

Section 176(c) of the CAA requires States to establish criteria and procedures to ensure that federally supported or funded projects conform to the air quality planning goals in the applicable SIP. The requirements to determine conformity applies to transportation plans, programs, and projects that are developed, funded, or approved under title 23 of the United

States Code (U.S.C.) or the Federal Transit Act (49 U.S.C. 1601) (transportation conformity) as well as to all other federally supported or funded projects (general conformity). State transportation conformity SIP revisions must be consistent with Federal conformity regulations relating to consultation, enforcement, and enforceability that EPA promulgated pursuant to its authority under the CAA. EPA's longstanding interpretation of the CAA is that because CAA section 176(c) conformity requirements continue to apply after areas are redesignated to attainment, whether or not the area has met that requirement is not a prerequisite to getting redesignated. In addition, based on EPA's April 2014 SO₂ Guidance, transportation conformity only applies to SO₂ SIPs if transportation-related emissions of SO₂ as a precursor are a significant contributor to a fine particulate matter (PM_{2.5}) nonattainment problem, or if the SIP has established an approved or adequate budget for such emissions as part of the RFP, attainment or maintenance strategy, neither of which apply to the Alton Township area. EPA concluded that highway and transit vehicles are not significant sources of SO₂ in this area. As a result, transportation conformity determinations are not required in the Alton Township SO₂ maintenance area. Therefore, transportation plans, transportation improvement programs and projects are presumed to conform to applicable implementation plans for SO₂. With respect to general conformity, Federal agencies are still required to address general conformity in the Alton Township SO₂ maintenance area.

Based on the above findings, EPA is proposing to find that Illinois has met the applicable requirements of section 110 and part D of title I of the CAA for purposes of the redesignation of the Alton Township nonattainment area, and EPA has fully approved the applicable implementation plan for such area.

Criteria (3)—The Air Quality Improvement in Alton Township SO₂ Nonattainment Area Is Due to Permanent and Enforceable Emission Reductions

To redesignate an area from nonattainment to attainment, section 107(d)(3)(E)(iii) of the CAA requires EPA to determine that the air quality improvement in the area is due to permanent and enforceable reductions in emissions resulting from the implementation of the SIP and applicable Federal air pollution control regulations and other permanent and

enforceable emission reductions. Illinois' attainment plan incorporates the Alton Steel Construction Permit (88 FR 10464, February 21, 2023) which requires the operation of a new LMF stack and does not change any existing requirements that apply to the furnace in the LMF, including the permitted emission unit limits which the Alton Steel facility was already subject to. The permit approved the construction of a new LMF stack to be finalized no later than July 31, 2019. The facility continues to meet existing SO₂ emission limits that do not exceed 0.10 pound per ton of steel produced, 11.20 lbs/hr, and 37.50 tons per year as shown in Table 1 above. EPA has included these emission limits and source configuration requirements in the approval of Illinois' SIP on February 21, 2023 (88 FR 10464), which will also render them federally enforceable. For Ameren-Sioux, a new limit was approved into the Missouri SIP establishing a more stringent limit of 7,342 lbs/hr averaged over a 24-hour block period. EPA approved Ameren-Sioux's new limit in a different rulemaking on November 16, 2022 (87 FR 68634). The updated EPA modeling in Illinois' attainment plan approval (88 FR 10464, February 21, 2023) included the change in emissions at both Alton Steel and Ameren-Sioux and showed attainment of the 2010 SO₂ standard throughout the Alton Township area. EPA is proposing to find, consistent with our approval of the State's attainment plan, that the modeling results demonstrate attainment and continued maintenance of the 2010 SO₂ NAAQS and that the air quality improvement in the Alton Township nonattainment area is due to permanent and enforceable reductions in emissions.

Criteria (4)—The Alton Township SO₂ Nonattainment Area Has a Fully Approved Maintenance Plan Pursuant to Section 175A

As a part of a State's maintenance plan, the air agency should develop an attainment emissions inventory to identify the level of emissions in the affected area which is sufficient to attain and maintain the SO₂ NAAQS.⁵ In its redesignation request, Illinois provided an emissions inventory for SO₂ in the nonattainment area for 2022, one of the years making up the attaining design value. Total actual emissions in the Alton Township area for the 2022 attainment year were 2,691.88 tons. This level of emissions, in combination with modifications at the Alton Steel facility,

⁵ See April 2014 SO₂ Guidance, page 66.

are sufficient to maintain the NAAQS. In its attainment plan, Illinois reported that total actual SO₂ emissions for the nonattainment area from 2017, a year during which the area was not attaining the NAAQS, were 4,280.97 tons. Construction of a new LMF stack at the Alton Steel facility to replace four downward facing vents, as well as the Consent Order limit of 7,342 lbs/hr averaged over a 24-hour block period accepted by the Ameren-Sioux power plant, led to decreases in actual SO₂ emissions by over 1,580 tons in the Alton Township area between 2017 and 2022. Previously, EPA's modeling for the Alton Township area based on maximum allowable levels at Alton Steel and updated limits on Ameren-Sioux already incorporated into the Illinois SIP and Missouri SIP respectively, resulted in a design value of 74.9 ppb, below the SO₂ NAAQS. *See* Alton SO₂ Nonattainment Plan TSD, 87 FR 80509 (December 30, 2022).

Section 175A of the CAA sets forth the elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. Under section 175A, the plan must demonstrate continued attainment of the applicable NAAQS for at least ten years after the nonattainment area is redesignated to attainment. Eight years after the redesignation, the State must submit a revised maintenance plan demonstrating that attainment will continue to be maintained for the ten years following the initial ten-year period. To address the possibility of future NAAQS violations, the maintenance plan must contain contingency measures, which EPA deems necessary to ensure prompt correction of any future 2010 SO₂ NAAQS violations.

Specifically, the maintenance plan should address five requirements: the attainment emissions inventory, maintenance demonstration, monitoring, verification of continued attainment, and a contingency plan. EPA is proposing to determine that Illinois' redesignation request of October 2, 2023, contains its maintenance plan and all the necessary components, which Illinois has committed to review eight years after the redesignation.

As a part of a State's maintenance plan, the air agency should develop an attainment emissions inventory to identify the level of emissions in the affected area which is sufficient to attain and maintain the SO₂ NAAQS.⁶ In its redesignation request, Illinois provided an emissions inventory for SO₂ in the

nonattainment area for 2022, one of the years making up the attaining design value. Total actual emissions in the Alton Township area for the 2022 attainment year were 2,691.88 tons. This level of emissions, in combination with modifications at the Alton Steel facility, are sufficient to maintain the NAAQS. In its attainment plan, Illinois reported that total actual SO₂ emissions for the nonattainment area from 2017, a year during which the area was not attaining the NAAQS, were 4,280.97 tons. Construction of a new LMF stack at the Alton Steel facility to replace four downward facing vents, as well as the Consent Order limit of 7,342 lbs/hr averaged over a 24-hour block period accepted by the Ameren-Sioux power plant, led to decreases in actual SO₂ emissions by over 1,580 tons in the Alton Township area between 2017 and 2022. Previously, EPA's modeling for the Alton Township area based on maximum allowable levels at Alton Steel and updated limits on Ameren-Sioux already incorporated into the Illinois SIP and Missouri SIP respectively, resulted in a design value of 74.9 ppb, below the SO₂ NAAQS. *See* Alton SO₂ Nonattainment Plan TSD, 87 FR 80509 (December 30, 2022).

EPA's "Procedures for Processing Requests to Redesignate Areas to Attainment" (Calcagni Memo)⁷ describes two ways for a State to demonstrate maintenance of the NAAQS following the redesignation of the area: (1) the State can show that future emissions of a pollutant will not exceed the level of the attainment inventory, or (2) the State can model to show that the future mix of sources and emission rate will not cause a violation of the standard. In both instances, the demonstration should be for a period of 10 years following the redesignation. Furthermore, the plan should contain a summary of air quality concentrations resulting from control measures implemented where modeling is relied upon to demonstrate maintenance. Illinois' maintenance demonstration consists of the attainment SIP air quality modeling analysis showing that the emissions reductions now in effect in the Alton Township area will provide for attainment of the 2010 SO₂ NAAQS. The permanent and enforceable SO₂ emission reductions described above ensure that the area emissions will be equal to or less than the emission levels that were evaluated in the air quality

modeling analysis, and Illinois' enforceable emission requirements will ensure that the Alton Township area SO₂ emission limits are met continuously.

By providing actual emissions data from Alton Steel and Ameren-Sioux, the main sources of SO₂, from a time period when the area was not meeting the NAAQS and from a time period when the area was attaining the NAAQS, Illinois demonstrates a 52 percent and 38 percent reduction in actual annual SO₂ emissions at Alton Steel and Ameren-Sioux, respectively. Illinois' submittal shows that actual annual Alton Steel SO₂ emissions in 2022 were 48 percent of the actual emissions in 2017 and shows actual annual 2022 Ameren-Sioux SO₂ emissions were 62 percent of the actual emissions in 2017. EPA's modeling described in the Criteria 4 section above, shows by modeling that modified LMF exhaust configuration at Alton Steel in addition to the newly imposed consent agreement SO₂ limits for Ameren-Sioux, which are federally enforceable, result in the area maintaining attainment of the SO₂ NAAQS.

For continuing verification, Illinois has committed to track the emissions and compliance status of the major facilities in the Alton Township area so that future emissions will not exceed the allowable emissions-based attainment inventory. All major sources in Illinois are required to submit annual emissions data, which the State uses to update its emission inventories as required by the CAA. The Alton Steel facility must submit annual compliance certifications to ensure the facility is meeting its SIP limits and the facility must submit a semi-annual Monitoring Report to the Illinois EPA, Air Compliance Section, summarizing required monitoring done and identifying all instances of deviation from the permit.

Illinois has also committed to continue operating an "appropriate air quality monitoring network to verify maintenance of the attainment status" of the Alton Township area. However, the closest monitor to the Alton area is the East St. Louis monitor (AQS ID: 17-163-0010, coordinates: 38.61203-90.16048) approximately 30 kilometers south of the Alton Steel facility. As such, Illinois commits to providing EPA with annual emissions report of the newly constructed Alton Steel LMF stack as part of Illinois' annual network plan submittal to provide ongoing verification of attainment. The Ameren-Sioux facility is subject to annual emissions data reporting under EPA's Federal emissions trading programs and,

⁷ Calcagni, John, Director, Air Quality Management Division, EPA Office of Air Quality Planning and Standards, "Procedures for Processing Requests to Redesignate Areas to Attainment," September 4, 1992.

⁶ *See* April 2014 SO₂ Guidance, page 66.

therefore, data are readily accessible via EPA's Clean Air Markets Program Division's database.⁸

Section 175A(d) of the CAA provides that a maintenance plan must contain contingency provisions that will promptly correct any violation of the 2010 SO₂ NAAQS after the area is redesignated to attainment (Calcagni Memo). The maintenance plan should identify the contingency measures to be adopted, a schedule and procedure for adoption and implementation, and a time limit for action by the State. A State should also identify specific indicators to be used to determine when the contingency measures need to be implemented. The maintenance plan must also include a requirement that a State will implement all measures with respect to control of the pollutant that were contained in the SIP before redesignation of the area to attainment in accordance with section 175A(d). Unlike CAA section 172(c)(9), section 175A of the CAA does not explicitly require that contingency measures must take effect without further action by the air agency in order for the maintenance plan to be approved. However, the maintenance plan's contingency plan would become an enforceable part of the SIP and should ensure that contingency measures are adopted and implemented as expeditiously as practicable once they are triggered.⁹ In the "General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," published on April 16, 1992 (57 FR 13498), EPA provides further discussion of contingency measures for SO₂. This guidance States that in many cases, attainment revolves around compliance of a single source or a small set of sources with emission limits shown to provide for attainment. Although this guidance applies to contingency measures under section 172(c)(9), EPA applies a similar policy with respect to contingency measures for SO₂ required in maintenance plans under section 175A(d). The requirement to submit contingency measures in accordance with section 175A of the CAA can be adequately addressed for SO₂ by the operation of a comprehensive enforcement program,¹⁰ which can quickly identify and address sources that might be causing exceedances of the NAAQS. Illinois' enforcement program is active and capable of prompt action to remedy compliance issues. Illinois commits to ongoing compliance and enforcement of

the control measures contained in the federally enforceable Construction Permit issued to Alton Steel approved and incorporated into the Illinois' attainment SIP approval (88 FR 10464, February 21, 2023). Illinois also has the necessary resources in the event of violations to enforce its permit provisions and rules. Illinois has the authority to expeditiously adopt, implement, and enforce any subsequent emission control measures deemed necessary to correct any future SO₂ violations. Illinois commits to adopting and implementing such corrective actions as necessary to address violations of the 2010 SO₂ NAAQS. Another contingency measure option is the implementation of a PSD program for new or modified existing sources of SO₂, which includes requirements for Best Available Control Technology, in the Alton nonattainment area once redesignated to attainment. The Ameren-Sioux Consent Agreement has been adopted into the Missouri SIP and includes monitoring, recordkeeping, and reporting requirements that will be used to confirm ongoing compliance incorporated into the Missouri SIP (87 FR 68634, November 16, 2022). Based on the foregoing, EPA proposes to find that Illinois has addressed the contingency measure requirement.

EPA is proposing to find that Illinois' maintenance plan adequately addresses the five basic components of a maintenance plan necessary to maintain the SO₂ NAAQS in the Alton Township nonattainment area. Therefore, EPA proposes to find that the redesignation and maintenance plan SIP revision submitted by Illinois for the 2010 SO₂ Alton Township nonattainment area meets the requirements of section 175A of the CAA and proposes to approve this plan.

III. What action is EPA taking?

EPA is proposing to redesignate the Alton Township area from nonattainment to attainment for the 2010 SO₂ NAAQS in accordance with Illinois' October 2, 2023, request. EPA has determined that the area is attaining the 2010 SO₂ NAAQS and that the improvement in air quality is due to permanent and enforceable SO₂ emission reductions in the area. EPA is also proposing to approve Illinois' maintenance plan, which is designed to ensure that the area will continue to maintain attainment of the 2010 SO₂ NAAQS. Additionally, EPA is proposing to determine the Alton Township area attained the 2010 SO₂ NAAQS by the September 12, 2021, attainment date addressing EPA's obligation under CAA section 179(c).

IV. Environmental Justice Concerns

To identify environmental burdens and potentially susceptible populations in the Alton Township area, EPA performed a screening-level analysis using EPA's environmental justice (EJ) screening and mapping tool (EJScreen).¹¹ The results of EPA's screening analysis are being provided for informational and transparency purposes, and EPA did not rely on these findings in its action on Illinois' submissions. EPA utilized the EJScreen tool to review environmental and demographic data, which provides an assessment of individual demographic groups of the populations living within the Alton Township area in Madison County. The tool output report is contained in the docket for this action. Due to the localized nature of SO₂, EPA considered a 1.5-mile radius of the Alton Steel facility in its assessment. EPA's screening-level analysis indicates that communities affected by this action score above the national percent average for the EJScreen "Demographic Index", which is the average of an area's percent minority and percent low-income populations, *i.e.*, the two demographic indicators explicitly named in Executive Order 12898. Additionally, the results indicate that the area scores below the 80th percentile (in comparison to the nation as a whole) for 8 out of the 13 EJ indexes established by EPA, which include a combination of environmental and demographic information. The Alton Township area scored at or above the 80th percentile for the ozone, toxic releases to the air, lead paint, RMP facility proximity, and wastewater discharge indexes. The analysis was done for the purpose of providing additional context and information about this rulemaking to the public, and not as a basis of the action. Due to the nature of the action being taken here, this action is expected to have a neutral to positive impact on the air quality of the affected area.

V. Statutory and Executive Order Reviews

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan are actions that affect the status of a geographical area and do not impose any additional regulatory requirements on sources beyond those imposed by State law. A redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of requirements contained in the CAA for

⁸ See Ameren-Sioux emissions data at <https://campd.epa.gov/data/custom-data-download>.

⁹ See April 2014 SO₂ Guidance, page 74.

¹⁰ See April 2014 SO₂ Guidance, page 41–42.

¹¹ See <https://www.epa.gov/ejscreen>.

areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For these reasons, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993), and 14094 (88 FR 21879, April 11, 2023);

- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);

- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);

- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);

- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- Is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it approves a State program;

- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001); and

- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA.

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those areas of Indian country, the rulemaking does not have Tribal implications and will not impose substantial direct costs on Tribal governments or preempt Tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, February 16, 1994) directs Federal agencies to identify and address “disproportionately high and adverse human health or environmental effects” of their actions on communities with EJ concerns to the greatest extent practicable and permitted by law. EPA defines EJ as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” EPA further defines the term fair treatment to mean that “no group of people should bear a disproportionate burden of

environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.”

Illinois did not include an evaluation of EJ considerations as part of its SIP submittal; the CAA and applicable implementing regulations neither prohibit nor require such an evaluation. EPA performed an EJ analysis, as is described above in the section titled, “Environmental Justice Considerations.” The analysis was done for the purpose of providing additional context and information about this rulemaking to the public, and not as a basis of the action. Due to the nature of the action being taken here, this action is expected to have a neutral to positive impact on the air quality of the affected area. In addition, there is no information in the record upon which this decision is based inconsistent with the stated goal of E.O. 12898 of achieving EJ for communities with EJ concerns.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: October 2, 2024.

Debra Shore,

Regional Administrator, Region 5.

[FR Doc. 2024–23164 Filed 10–7–24; 8:45 am]

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Notices

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This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments are required regarding; whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Comments regarding this information collection received by November 7, 2024 will be considered. Written comments and recommendations for the proposed information collection should be submitted within 30 days of the publication of this notice on the following website www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it

displays a currently valid OMB control number.

Farm Service Agency

Title: Direct Loan Servicing—Special.

OMB Control Number: 0560–0233.

Summary of Collection: The Farm Service Agency's (FSA) Farm Loan Programs provide loans to family farmers to purchase real estate and equipment and finance agricultural production. The regulation in the 7 CFR 766, Direct Loan Servicing—Special provides the requirements for servicing financially distressed and delinquent direct loan borrowers. The loan servicing options include disaster set-aside, primary loan servicing (including reamortization, rescheduling, deferral, write down and conservation contracts), buyout at market value, and homestead protection. FSA also services borrowers who file bankruptcy or liquidate security when available servicing options are not sufficient to produce a feasible plan. The information collections contained in the regulation are necessary to evaluate a borrower's request for consideration of the special servicing actions.

Need and Use of the Information: Information collections are submitted by FLP direct loan borrowers to the local FSA office serving the country in which their business is headquartered. The information is necessary to provide supervised credit and authorized servicing actions to financially distressed and delinquent direct borrowers as legislatively mandated. If the information were not collected, or collected less frequently, FSA would be unable to meet the mandated mission of its loan program required by Congress.

Description of Respondents: Individuals or households; Business or other for-profit; Farms.

Number of Respondents: 17,174.

Frequency of Responses: Reporting: On occasion; Annually.

Total Burden Hours: 12,221.

Rachelle Ragland-Greene,

Departmental Information Collection Clearance Officer.

[FR Doc. 2024–23207 Filed 10–7–24; 8:45 am]

BILLING CODE 3410–05–P

DEPARTMENT OF AGRICULTURE

Forest Service

Information Collection; Special Use Administration

AGENCY: Forest Service, Agriculture (USDA).

ACTION: Notice; request for comment.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, the Forest Service (Forest Service or Agency) is requesting comment on reapproval and proposed revisions of an approved information collection request (ICR), 0596–0082, Special Use Administration.

DATES: Comments on reapproval and the proposed revisions of the ICR must be received in writing by December 9, 2024.

ADDRESSES: Comments may be sent to Director, Lands, Minerals, and Geology staff, 201 14th Street SW, Washington, DC 20250–1124, or may be submitted to <https://www.regulations.gov>. Comments submitted in response to this notice will be available to the public through the relevant website and upon request. Therefore, do not include confidential information, such as sensitive personal or proprietary information. Email addresses associated with comments will be included as part of the comment that is made publicly available online.

The public may inspect the supporting documents for the ICR and comments received at the Office of the Director, Lands, Minerals, and Geology staff, 1st Floor Southeast, Sidney R. Yates Federal Building, 201 14th Street SW, Washington, DC, on business days between 8:30 a.m. and 4 p.m. Visitors are encouraged to call ahead at 202–205–0444 to facilitate entry into the building. The public may request an electronic copy of the supporting documents via return email. Requests should be emailed to sm.fs.SU_forms@usda.gov. The ICR, including the proposed revisions, is posted at <https://usfs-public.box.com/s/bd84lkk0sxeenfoiq9f00eef2wbh8q6t>.

FOR FURTHER INFORMATION CONTACT:

Sadie Wehunt, National Assistant Recreation Special Uses Program Manager, Recreation, Heritage, and Volunteer Resources staff, at sadie.wehunt@usda.gov or 406–249–7894 or Nick Szuch, Communications

Use Specialist, Lands, Minerals, and Geology staff, at nicholas.szuch@usda.gov or 970-589-5231. Individuals who use telecommunication devices for the hearing-impaired may call 711 to reach the Telecommunications Relay Service, 24 hours a day, every day of the year, including holidays.

SUPPLEMENTARY INFORMATION:

Title: Special Uses Administration.

OMB Number: 0596-0082.

Expiration Date of Approval:

December 31, 2024.

Type of Request: Reapproval and proposed revisions of an approved ICR.

Abstract: The Forest Service manages approximately 193 million acres of Federal lands, known as National Forest System (NFS) lands. Several statutes authorize the Forest Service to issue and administer special use authorizations for use and occupancy of NFS lands and to collect information from the public for those purposes, including but not limited to the Organic Administration Act of 1897 (16 U.S.C. 551); Title V of the Federal Land Policy and Management Act of 1976 (FLPMA, 43 U.S.C. 1761-1772); Term Permit Act of March 4, 1915 (16 U.S.C. 497); National Forest Ski Area Permit Act (16 U.S.C. 497b); section 28 of the Mineral Leasing Act (30 U.S.C. 185); National Forest Roads and Trails Act (FRTA, 16 U.S.C. 532-538); section 7 of the Granger-Thye Act (16 U.S.C. 480d); Act of May 26, 2000 (16 U.S.C. 460l-6d); Federal Lands Recreation Enhancement Act (16 U.S.C. 6801-6814); Archaeological Resources Protection Act of October 31, 1979 (16 U.S.C. 1996); and section 111 of the National Historic Preservation Act (54 U.S.C. 306121). Forest Service regulations implementing these authorities at 36 CFR part 251, subpart B, require collection of information, including submission of special use applications, execution of special use authorization forms, and imposition of terms that require submission of information. Uses authorized on NFS lands include a variety of activities, facilities, and improvements such as recreation residences, apiaries, domestic water supply conveyance systems, road rights-of-way, powerline facilities, communications uses, outfitting and guiding, campground concessions, resorts, ski areas, and marinas. Special use authorization forms are used to authorize these activities, facilities, and improvements on NFS lands.

Forest Service regulations at 36 CFR part 251, subpart B, require each special use authorization to contain terms that will carry out the purposes of applicable statutes and their implementing regulations; minimize damage to scenic

and aesthetic values, fish and wildlife habitat, and otherwise protect the environment; require compliance with applicable air and water quality standards; and require compliance with State standards that are more stringent than Federal standards for public safety, environmental protection, and siting, construction, operation, and maintenance (36 CFR 251.56(a)(1)(i)). In addition, Forest Service regulations require each special use authorization to contain terms deemed necessary by the Agency to protect Federal property and economic interests; efficiently manage the authorized NFS lands and adjacent NFS lands; protect other lawful users of the authorized NFS lands and adjacent NFS lands; protect lives and property; protect the interests of those living in the vicinity of the authorized use who rely on the fish, wildlife, and other biotic resources of the area for subsistence; require siting to cause the least environmental damage, taking into consideration feasibility and other relevant factors; and otherwise protect the public interest (36 CFR 251.56(a)(1)(ii)).

The Forest Service uses the forms and clauses in this ICR to ensure that uses of NFS lands are administered in accordance with applicable statutes, regulations, and Agency directives. The information collected is used to evaluate applications for special uses, monitor compliance with special use authorizations, generate bills for collection of land use fees for special use authorizations, create reports for the Agency's Special Uses Program, and other matters pertaining to administration of special use authorizations.

There are six categories of information collected by this ICR:

- (1) Information required from applicants to evaluate special use applications and issue special use authorizations;
- (2) Information required from holders to administer their special use authorization;
- (3) Annual financial information required from holders to determine annual land use fees for their special use authorization;
- (4) Information required from holders to prepare and update the operating plan for their special use authorization;
- (5) Information required from holders to prepare and update a road maintenance plan; and
- (6) Information required from holders to complete compliance reports and informational updates.

The six categories cover the entire ICR, including special use application and special use authorization forms;

cost recovery agreements; prospectus forms; reporting forms; supplemental special use authorization clauses in Forest Service Handbook 2709.11, chapter 50; and information collected other than through use of a form. These six categories demonstrate the complexity of the Special Uses Program and the importance of the ICR in administration of the program.

Category 1: The Special Use Application Process

FS-2700-3a, Request for Revocation of a Special Use Authorization, is used to facilitate issuance of a new special use authorization when there is a change in ownership of authorized improvements or a change in control of the holder of a special use authorization.

FS-2700-3b, Special Use Permit for Noncommercial Group Use, provides information used to evaluate requests to use NFS lands for noncommercial gatherings involving 75 or more people, such as a wedding or an activity involving the exercise of First Amendment rights, and to authorize such requests.

FS-2700-3c, Special Use Application and Permit for Recreation Events, is used to collect information needed to evaluate requests to use NFS lands for events involving an entry or participation fee, such as an endurance ride, and to authorize such requests.

FS-2700-3f, Special Use Application and Temporary Permit for Outfitting and Guiding, is the form used by the Forest Service to collect information and to issue temporary permits to use NFS lands for outfitting and guiding.

FS-2700-10, Technical Data Sheet for Communications Uses, is the form used by the Forest Service to collect information on and to evaluate the compatibility of communications equipment at a communications site to minimize frequency interference and other compatibility problems.

FS-2700-11, Agreement Concerning a Small Business Administration Loan for a Holder of a Special Use Permit, is the form used by the Forest Service to collect information and to enter into an agreement with a holder, a lender, and the U.S. Small Business Administration regarding a loan guaranteed by the Small Business Administration.

FS-2700-12, Agreement Concerning a Loan for a Holder of a Special Use Authorization, is the form used by the Forest Service to collect information and to enter into an agreement with a holder and a lender regarding a loan not guaranteed by the Small Business Administration.

FS-2700-30, Application for Permit for Archaeological Investigations, is the form used by the Forest Service to collect information and to evaluate the technical capability and qualifications of an applicant to conduct archaeological investigations on NFS lands.

FS-2700-33, Insurance Endorsement for a Special Use Authorization, is the form used by the Forest Service to collect information and to name the United States as an additional insured in an insurance policy issued to the holder of a special use authorization.

FS-2700-34, Prospectus for Campground and Related Granger-Thye Concessions, is the form used by the Forest Service to select the most qualified applicant to operate a campground concession through a competitive process.

Prospectuses for other types of uses are developed when there is competitive interest to select the most qualified applicant to operate other types of concessions.

FS-2700-40, Assumption of Risk, Waiver of Liability, and Indemnity Agreement for Good Samaritan Search and Recovery Missions, is the form used by the Forest Service to collect information and to provide for assumption of risk, waiver of claims against the United States, and indemnification of the United States during good Samaritan search and rescue activities.

FS-6500-24, Financial Statement, is the form used by the Forest Service to collect information on and to evaluate the financial capability of an applicant to undertake the proposed use and to comply with the terms of the special use authorization for the proposed use. This form is used primarily for applications to operate ski areas, resorts, and federally owned campgrounds on NFS lands.

FS-6500-25, Request for Verification, is the form used by the Forest Service to (1) obtain information from a financial institution to verify the financial capability of an applicant to undertake the proposed use; and (2) comply with the terms of the special use authorization for the proposed use. This form is used primarily for applications to operate ski areas, resorts, and federally owned campgrounds on NFS lands.

Category 2: Special Use Authorizations and Clauses in Directives

FS-2700-4, Special Use Permit, is the form used by the Forest Service to collect information for and to authorize a variety of uses on NFS lands not

covered by another special use authorization form.

FS-2700-4b, Forest Road Special Use Permit, is the form used by the Forest Service to collect information for and to authorize under FLPMA the construction and use of an NFS road, typically to access private property within a national forest for commercial purposes such as timber hauling or noncommercial purposes such as residential use.

FS-2700-4c, Private Road Special Use Permit, is the form used by the Forest Service to collect information for and to authorize under FLPMA the construction and use of a road that is not part of the forest transportation system to access nonFederal land, a mining claim, a mineral leasing area, or other uses of NFS lands.

FS-2700-4d, Special Use Permit for a Temporary Road Covered by a Cost Share Agreement, is the form used by the Forest Service to collect information for and to authorize under FLPMA the construction, maintenance, and use of a temporary road on NFS lands covered by a cost share agreement to access private property within a national forest for commercial purposes, such as timber harvesting.

FS-2700-4h, Special Use Permit for Campground and Related Granger-Thye Concessions, is the form used by the Forest Service to collect information for and to authorize the operation and maintenance of a federally owned campground and related federally owned developed recreation sites on NFS lands.

FS-2700-4h, Appendix C, Special Use Permit for Campground and Related Granger-Thye Concessions, Granger-Thye Fee Offset Agreement, is the form used by the Forest Service to collect information regarding the Government maintenance, reconditioning, renovation, and improvement to be performed to offset the annual land use fee for a Campground and Related Granger-Thye Concessions Special Use Permit.

FS-2700-4h, Appendix G, Special Use Permit for Campground and Related Granger-Thye Concessions, Operation of Federally Owned Drinking Water Systems, is the form used by the Forest Service to collect information in connection with a campground concessioner's operation of a federally owned drinking water system.

FS-2700-4h, Appendix H, Special Use Permit for Campground and Related Granger-Thye Concessions, Granger-Thye Fee Offset Claim, is the form used by the Forest Service to collect information regarding claims for allowable costs for Government

maintenance, reconditioning, renovation, and improvement for purposes of offsetting the annual land use fee for a Campground and Related Granger-Thye Concessions Special Use Permit.

FS-2700-4i, Special Use Permit for Outfitting and Guiding, is the form used by the Forest Service to collect information for and to authorize the use and occupancy of NFS lands to conduct outfitting and guiding.

FS-2700-4i, Appendix H, Special Use Permit for Outfitting and Guiding, Annual Stewardship Act Fee Offset Agreement, is the form used by the Forest Service to collect information regarding the construction, improvement, or maintenance of NFS trails, trailheads, or developed sites to be performed to offset the annual land use fee for a Special Use Permit for Outfitting and Guiding.

FS-2700-4i, Appendix I, Special Use Permit for Outfitting and Guiding, Annual Stewardship Act Fee Offset claim, is the form used by the Forest Service to collect information regarding claims for allowable costs for the construction, improvement, or maintenance of NFS trails, trailheads, or developed sites to be performed to offset the annual land use fee for a Special Use Permit for Outfitting and Guiding.

FS-2700-4j, Powerline Facility Permit for nonFederal Entities, is the form used by the Forest Service to collect information for and to authorize the use and occupancy of NFS lands by a nonFederal entity that owns and operates an electric transmission line and associated facilities.

FS-2700-4m, Special Use Permit for Archaeological Investigations, is the form used by the Forest Service to collect information for and to authorize an archaeological investigation.

FS-2700-4 Shawnee, Special Use Permit for Equestrian Outfitting in the Shawnee National Forest, is the form used by the Forest Service to collect information for and to authorize equestrian outfitting and guiding in the Shawnee National Forest.

FS-2700-5, Term Special Use Permit, is the form used by the Forest Service to collect information for and to authorize long-term use of NFS lands involving a privately owned facility.

FS-2700-5a, Term Special Use Permit for Recreation Residences, is the form used by the Forest Service to collect information for and to authorize a privately owned recreation residence on NFS lands.

FS-2700-5a Grand Island, Term Special Use Permit for Recreation Residences, is the form used by the Forest Service to collect information for

and to authorize a privately owned recreation residence in the Grand Island Recreation Area.

FS-2700-5b, Ski Area Term Special Use Permit, is the form used by the Forest Service to collect information for and to authorize a ski area on NFS lands.

FS-2700-5c, Resort and Marina Term Special Use Permit, is the form used by the Forest Service to collect information for and to authorize a resort and marina on NFS lands.

FS-2700-5d, Special Use Permit, Resort Supplement for Outfitting and Guiding, is the form used by the Forest Service to collect information for and to authorize outfitting and guiding in connection with a commercial public service site on NFS lands.

FS-2700-9a, Agricultural Irrigation and Livestock Watering System Easement, is the form used by the Forest Service to collect information for and to grant an easement for an agricultural irrigation or a livestock watering system on NFS lands.

FS-2700-9d, Cost Share Easement, is the form used by the Forest Service to collect information for and to authorize under FRTA the acquisition, construction, reconstruction, maintenance, and use of an NFS road that is subject to a cost share agreement. The parties to the cost share agreement grant each other easements within the geographic area covered by the agreement. A cost share easement is for an NFS road and is subject to the cost sharing provisions of the agreement.

FS-2700-9e, Non-Cost Share Easement, is the form used by the Forest Service to collect information for and to authorize under FRTA the construction, reconstruction, maintenance, and use of a private road under a cost share agreement. The parties to the cost share agreement grant each other easements within the geographic area covered by the agreement. A non-cost share easement is for a private road (rather than an NFS road) and is not subject to the cost sharing provisions of the agreement.

FS-2700-9f, Public Road Easement, is the form used by the Forest Service to collect information for and to grant an easement under FRTA to a public road authority, such as a State or county, to construct and maintain a public road that is not part of the Federal Aid Highway System.

FS-2700-9g, Forest Road Easement, is the form is used by the Forest Service to collect information for and to grant an easement under FRTA to a party to a cost share agreement or to another nonFederal landowner who is cooperating in the acquisition,

construction, or maintenance of an NFS road. The easement is for acquisition, construction or reconstruction, maintenance, and use of an NFS road that is outside the scope of a cost share agreement. At the time the easement is granted, the grantor and the grantee share the costs of acquisition, construction, and reconstruction. After the easement is granted, the grantor and the grantee share only the cost of maintenance.

FS-2700-9h, Private Road Easement, is the form used by the Forest Service to collect information for and to grant an easement under FRTA to a party to a cost share agreement or to another nonFederal landowner who is cooperating in the acquisition, construction, or maintenance of an NFS road. The easement is for construction or reconstruction, maintenance, and use of a private road that is outside the boundaries of a cost share agreement. Since the easement is for a private rather than an NFS road, the costs of constructing, reconstructing, and maintaining the road are borne by the grantee.

FS-2700-9i, Forest Road Easement, is the form used by the Forest Service to collect information for and to grant an easement under FLPMA for construction, reconstruction, maintenance, and use of an NFS road when the grantee is not a party to a cost share agreement for the acquisition, construction, and maintenance of an NFS road or when the grantee does not meet the requirements for issuance of a forest road easement under FRTA.

FS-2700-9j, Private Road Easement, is the form used by the Forest Service to collect information for and to grant an easement under FLPMA for construction, reconstruction, maintenance, and use of a private road when the grantee is not a party to a cost share agreement for the acquisition, construction, and maintenance of an NFS road or when the grantee does not meet the requirements for issuance of a private road easement under FRTA.

FS-2700-10b, Communications Use Lease, is the form used by the Forest Service to collect information for and to authorize a communications use on NFS lands.

FS-2700-13, Historic Property Lease, is the form used by the Forest Service to collect information for and to authorize leasing of an historic property under the jurisdiction of the Forest Service.

FS-2700-14, Lease for Forest Service Administrative Sites, is the form used by the Forest Service to collect information for and to authorize leasing of a Forest Service administrative site

under the Forest Service Facility Realignment and Enhancement Act of 2005 or section 8623 of the Agriculture Improvement Act of 2018 (2018 Farm Bill).

FS-2700-14a, Prospectus for Leasing Administrative Sites, is the form used by the Forest Service to collect information and to solicit applications for a Forest Service administrative site lease under section 8623 of the 2018 Farm Bill or the Forest Service Facility Realignment and Enhancement Act of 2005.

FS-2700-14b, Lease for Forest Service Administrative Sites, Appendix B, In-Kind Consideration Agreement, is the form used by the Forest Service to collect information for and to agree to in-kind consideration for a Forest Service administrative site lease issued under section 8623 of the 2018 Farm Bill.

FS-2700-14c, Lease for Forest Service Administrative Sites, Appendix C, Claim for In-Kind Consideration Costs, is the form used by the Forest Service to collect information for and to approve costs claimed as in-kind consideration for a Forest Service administrative site lease issued under section 8623 of the 2018 Farm Bill.

FS-2700-23, Amendment of a Special Use Authorization, is the form used by the Forest Service to collect information for and to amend a special use authorization.

FS-2700-25, Temporary Special Use Permit, is the form used by the Forest Service to collect information for and to authorize use and occupancy of 1 year or less on NFS lands.

FS-2700-26, Category 6 Major Category Cost Recovery Agreement, is the form used by the Forest Service to collect information and cost recovery fees for a special use application or authorization involving over 50 hours to process or monitor.

FS-2700-26b, Category 5 Cost Recovery Master Agreement, is the form used by the Forest Service to collect information and cost recovery fees for a special use application or authorization involving multiple phases of development or a group of applications or similar applications for a specified geographic area.

FS-2700-27, Notice to Alaska Native Corporations Regarding Upcoming Prospectus for Visitor Services, is the form used by the Forest Service to collect information for and to provide notice to Alaska Native Corporations of the issuance of a prospectus to conduct visitor services in Conservation System Units in Alaska. Notification provides the Alaska Native Corporations a chance to request designation as a most directly

affected Native Corporation for purposes of competing for the opportunity to conduct visitor services.

FS-2700-31, Powerline Facility Easement, is the form used by the Forest Service to collect information for and to grant an easement under FLPMA for a powerline facility to a nonFederal entity.

Forest Service Handbook (FSH) 2709.11, Chapter 50, is the directive that contains standard clauses that have been approved for use in special use authorizations.

Category 3: Financial Information

FS-2700-7, Annual Gross Revenue for Purposes of Annual Land Use Fee Calculation, is the form used by the Forest Service to collect information for and to determine annual land use fees based on annual gross revenue.

FS-2700-8, Annual Gross Fixed Assets for Purposes of Annual Land Use Fee Calculation, is the form used by the Forest Service to collect information for and to determine annual land use fees based on the holder's gross fixed assets.

FS-2700-10a, Facility Owner and Occupant Inventory of Communications Uses, is the form used by the Forest Service to collect information for and to determine the annual land use fees for a communications facility based on the communications uses in or on the communications facility.

FS-2700-19, Annual Land Use Fee Calculation for Concession Permits, is the form used by the Forest Service to collect information for and to determine the annual land use fee for commercial recreation special use permits under the Graduated Rate Fee System.

FS-2700-19a, Annual Land Use Fee Calculation for Ski Area Permits, is the form used by the Forest Service to collect information for and to determine the annual land use fee for ski area permits under the National Forest Ski Area Permit Fee Act.

FS-2700-38, Documentation of Eligibility for Financing by the Rural Utilities Service Under the Rural Electrification Act, is the form used by the Forest Service to collect information and for the Rural Utilities Service to determine eligibility for an exemption from a land use fee under the Rural Electrification Act.

Information is collected by the Forest Service from holders of a special use authorization for other purposes in connection with administration of their special use authorization. The Forest Service collects information from holders of a special use authorization regarding various business practices, such as accounting or other financial

records, typically under the terms of their authorization.

Category 4: Preparing and Updating Operating Plans

Special use authorizations may contain a clause requiring the holder to prepare and update an operating plan governing day-to-day operations of the authorized use. The information collected in preparing and updating operating plans is used in specifying the procedures and policies for conducting the authorized use. Typically, operating plans contain daily operating guidelines, fire abatement and control procedures, monitoring guidelines, maintenance standards, safety and emergency plans, and inspection standards. Operating plans are usually necessary for complex operations, commercial uses, and uses conducted in environmentally sensitive areas.

Category 5: Preparing and Updating Maintenance Plans

A permit or easement issued under FLPMA or FRTA may require the holder or grantee to submit and update a road maintenance plan or information necessary for the preparation of a road maintenance plan. A road maintenance plan governs the responsibility of the holder or grantee to perform or pay for the holder's or grantee's share of maintenance costs for an NFS road.

Category 6: Compliance Reports and Information Updates

FS-2700-1, Monitoring Report for Special Uses, is the form used by the Forest Service to collect information for and to document compliance of an authorized use with the governing special use authorization.

FS-2700-6b, Recreation Residence Self-Inspection Report, is the form used by the Forest Service to collect information for and to review and record any modifications made to a recreation residence.

Compliance Reports and Information Updates. Special use authorizations may contain a clause requiring the holder to provide the Forest Service with compliance reports, other types of reports, and other information that is required by Federal law or that is required to ensure adequate protection of NFS resources or to address public health and safety concerns. Examples of compliance and information updates include dam maintenance inspection reports and logs required by the Reclamation Safety of Dams Act of 1978 and the National Dam Safety Program Act; documentation that authorized facilities passed safety inspections; documentation showing that the United

States is included as an additional insured in an endorsement to an insurance policy issued to a holder; notifications involving a change in ownership of authorized improvements or a change in control of the holder; and documentation of compliance with Title VI of the Civil Rights Act of 1964.

Estimated Annual Burden: 2 burden hours per response.

Types of Respondents: Individuals, businesses, non-profit entities, and Federal and non-Federal governmental entities.

Estimated Annual Number of Respondents: 80,684.

Estimated Annual Number of Responses per Respondent: 1.

Estimated Total Annual Burden on Respondents: 77,653 hours.

Comment is requested on: (1) whether the ICR is necessary for the stated purposes and the proper performance of the functions of the Agency, including whether the information will have practical or scientific utility; (2) the accuracy of the Agency's estimate of the burden of the ICR, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

In conjunction with reapproval of the ICR, the Forest Service is requesting comment on substantive revisions to the ICR. In particular, the Forest Service is requesting comment on 3 proposed new special use authorization forms and proposed updates of the following 34 special use authorization forms. The Forest Service is not requesting comment on any other provisions in these 34 special use authorization forms, which are not proposed for revision:

FS-2700-3c
FS-2700-3f
FS-2700-4
FS-2700-4b
FS-2700-4c
FS-2700-4d
FS-2700-4h
FS-2700-4h, Appendix C
FS-2700-4h, Appendix H
FS-2700-4i
FS-2700-4i, Appendix H
FS-2700-4j, Appendix I
FS-2700-4j
FS-2700-4 Shawnee
FS-2700-5
FS-2700-5a
FS-2700-5a Grand Island
FS-2700-5b
FS-2700-5c

FS-2700-9a
 FS-2700-9d
 FS-2700-9e
 FS-2700-9f
 FS-2700-9g
 FS-2700-9h
 FS-2700-9i
 FS-2700-9j
 FS-2700-10b
 FS-2700-10c
 FS-2700-13
 FS-2700-14
 FS-2700-14b
 FS-2700-25
 FS-2700-31

The following describes the 3 proposed new special use authorization forms and the proposed revision or addition of standard clauses in the 34 special use authorization forms.

Proposed New Special Use Authorization Forms

The Forest Service is requesting public comment on 3 proposed new special use authorization forms: FS-2700-10d, Communications Use Permit for Use and Occupancy of Structures Under the Jurisdiction of the Forest Service; FS-2700-4o, Oil or Gas Pipeline Facility Permit; and FS-2700-31a, Oil or Gas Pipeline Facility Easement.

FS-2700-10d, Proposed Communications Use Permit for Use and Occupancy of Structures Under the Jurisdiction of the Forest Service

Section 7 of the Granger-Thye Act authorizes the Forest Service to issue permits to public or private entities or individuals for the use and occupancy of Federally owned structures and other improvements under the jurisdiction of the Forest Service and their underlying land. This proposed new form would standardize authorization of communications uses in or on communications facilities or improvements under the jurisdiction of the Forest Service consistent with section 7 of the Granger-Thye Act and the Agency's implementing regulations and directives, thereby enhancing efficiency, consistency, and legal and programmatic sufficiency. Currently FS-2700-4, Special Use Permit, which is generic, is used for this purpose, and clauses must be added as directed in FSH 2709.11, Chapter 50. Use of this proposed new form would not increase the burden, but rather would shift some of the burden associated with use of FS-2700-4 to use of this proposed new form.

Estimated Annual Burden: 2 burden hours per response.

Type of Respondents: Individuals, businesses, non-profit entities, and

Federal and nonFederal governmental entities.

Estimated Annual Number of Respondents: 18 respondents.

Estimated Annual Number of Responses per Respondent: 1.

Estimated Total Annual Burden on Respondents: 36 hours.

Comment is requested on (1) whether the collection of information associated with the proposed new form is necessary for the stated purposes and the proper performance of the functions of the Agency, including whether the information will have practical or scientific utility; (2) the accuracy of the Agency's estimate of the burden of the collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

FS-2700-4o, Proposed Oil or Gas Pipeline Facility Permit

The proposed new form, FS-2700-4o, Oil or Gas Pipeline Facility Permit, would standardize issuance of permits for oil and gas pipelines and related infrastructure on NFS lands under the Mineral Leasing Act. This proposed new form would enhance efficiency, consistency, and legal and programmatic sufficiency in authorization of oil and gas infrastructure on NFS lands, consistent with the governing statute and the Agency's implementing regulations and directives. Currently FS-2700-4, Special Use Permit, which is generic, is used for this purpose, and clauses must be added as directed in FSH 2709.11, Chapter 50. Use of this proposed new form would not increase the burden, but rather would shift some of the burden associated with use of FS-2700-4 to use of this proposed new form.

Estimated Annual Burden: 2 burden hours per response.

Type of Respondents: Individuals, businesses, non-profit entities, and Federal and nonFederal governmental entities.

Estimated Annual Number of Respondents: 20 respondents.

Estimated Annual Number of Responses per Respondent: 1.

Estimated Total Annual Burden on Respondents: 40 hours.

Comment is requested on (1) whether the collection of information associated with the proposed new form is

necessary for the stated purposes and the proper performance of the functions of the Agency, including whether the information will have practical or scientific utility; (2) the accuracy of the Agency's estimate of the burden of the collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

FS-2700-31a, Proposed Oil or Gas Pipeline Facility Easement

The proposed new form, FS-2700-31a, Oil or Gas Pipeline Facility Easement, would standardize issuance of easements for oil and gas pipelines and related infrastructure on NFS lands under the Mineral Leasing Act. This proposed new form would enhance efficiency, consistency, and legal and programmatic sufficiency in authorizing oil and gas infrastructure on NFS lands, consistent with the governing statute and the Agency's implementing regulations and directives. Currently FS-2700-4, Special Use Permit, which is generic, is used for this purpose, and clauses must be added as directed in FSH 2709.11, Chapter 50. Use of this proposed new form would not increase the burden, but rather would shift some of the burden associated with use of FS-2700-4 to use of this proposed new form.

Estimated Annual Burden: 2 burden hours per response.

Type of Respondents: Individuals, businesses, non-profit entities, and non-Federal governmental entities.

Estimated Annual Number of Respondents: 8 respondents.

Estimated Annual Number of Responses per Respondent: 1.

Estimated Total Annual Burden on Respondents: 16 hours.

Comment is requested on (1) whether the collection of information associated with the proposed new form is necessary for the stated purposes and the proper performance of the functions of the Agency, including whether the information will have practical or scientific utility; (2) the accuracy of the Agency's estimate of the burden of the collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the

collection of information on respondents, including the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Proposed Revision or Addition of Standard Clauses in Special Use Authorization Forms

The Forest Service is proposing to remove the requirement in FS-2700-5a, Term Special Use Permit for Recreation Residences, and FS-2700-5a Grand Island, Term Special Use Permit for Recreation Residences in the Grand Island National Recreation Area, to use the authorized recreation residence at least 15 days per year. The Forest Service does not believe it is necessary or appropriate to require minimum use and occupancy of a private, noncommercial recreation residence.

The Forest Service is also proposing to remove the requirement to enter into a Granger-Thye Act fee offset agreement in FS-2700-4h, Special Use Permit for Campground and Related Granger-Thye Concessions, and clause A-20 in FSH 2709.11, Chapter 50, section 52.1, and replace it with language giving the authorized officer discretion to enter into a Granger-Thye Act fee offset agreement.

Required Standard Clauses

The Forest Service is including clause D-4, the standard Federal Survey Monuments, Corners, and Boundary Markers clause; clause X-17, the standard Archaeological and Paleontological Discoveries clause; clause X-33, the standard Relocation clause; and the standard Native American Graves Protection and Repatriation Act clause in special use authorization forms that lack those standard clauses. Per FSH 2709.11, Chapter 50, these clauses are mandatory in some special use authorizations for uses that involve ground disturbance or improvements. Adding these clauses to special use authorization forms for uses that require the clauses will enhance efficiency, consistency, and legal and programmatic sufficiency, consistent with applicable directives.

These 4 standard clauses are being added to the following special use authorization forms:

FS-2700-4
FS-2700-4b
FS-2700-4c
FS-2700-4j
FS-2700-4k
FS-2700-5
FS-2700-5a
FS-2700-5a Grand Island
FS-2700-5b

FS-2700-5c
FS-2700-9a
FS-2700-9d
FS-2700-9e
FS-2700-9f
FS-2700-9g
FS-2700-9h
FS-2700-9i
FS-2700-9j
FS-2700-10b
FS-2700-10c
FS-2700-13
FS-2700-14
FS-2700-31

Nonsubstantive Revisions That Do Not Require Public Notice and Comment

Required Minimum Wage, Paid Sick Leave, and Davis-Bacon Act Clauses

The Forest Service is including the minimum wage and paid sick leave clauses in FSH 2709.11, Chapter 50, section 52.3, clauses C-5 and C-6, in the following 15 special use authorization forms, consistent with Executive Orders 14026 and 13706 and their implementing regulations. The minimum wage and paid sick leave clauses are being added to the following special use authorization forms:

FS-2700-3c
FS-2700-3f
FS-2700-4
FS-2700-4h
FS-2700-4i
FS-2700-4j
FS-2700-4 Shawnee
FS-2700-5
FS-2700-5b
FS-2700-5c
FS-2700-10b
FS-2700-13
FS-2700-14
FS-2700-25
FS-2700-31

The Forest Service is also adding the Davis-Bacon Act, minimum wage, and paid sick leave clause in FSH 2709.11, Chapter 50, section 52.3, clause C-4, to FS-2700-4h, Appendix C; FS-2700-4i, Appendix H; and FS-2700-14b, consistent with the Davis-Bacon Act and Executive Orders 14026 and 13706 and their implementing regulations.

Lack of Authority To Include Indirect Costs for Subcontract Costs

The Forest Service is revising FS-2700-4h, Appendix H, Granger-Thye Fee Offset Claim, to clarify that while subcontract costs may be included in direct costs for purposes of offsetting the annual land use fee under section 7 of the Granger-Thye Act, indirect costs may not be included for subcontract costs for purposes of the offset per FAR 52.251-23 unless certain criteria are met, as determined by the Forest Service.

Inclusion of Dam Safety Clauses in FS-2700-5b, Term Special Use Permit for Ski Areas

The Forest Service is adding the Dam Safety clauses, clauses B-36 and B-37, as clause III.T of FS-2700-5b, Ski Area Term Special Use Permit. Per FSH 2709.11, Chapter 50, section 52.2, one of these clauses, as applicable, must be included in a special use authorization that authorizes a dam. Ski areas often have impoundments in the permit area for purposes of snowmaking. Including the clauses in FS-2700-5b will enhance efficiency, consistency, and legal and programmatic sufficiency, consistent with applicable Agency directives.

Although inclusion of the applicable dam safety clause is required in any special use authorization that authorizes a dam, the Forest Service believes that the applicable dam safety clause has not generally been included in FS-2700-5b when a dam is authorized at a ski area. Therefore, the Forest Service is accepting comment on inclusion of the dam safety clauses in FS-2700-5b.

Removal of Forms

The Forest Service is removing the following forms from the ICR. These forms are either included in a different ICR or are no longer needed for administration of the Special Uses Program.

The following forms are being removed from the ICR because they have been approved for use under a separate ICR, OMB 0596-0081:

FS-2800-22A, Application for Authorization for Paleontological Resources Research or Collection, which is used by the Forest Service to collect information for and to evaluate an application for paleontological resources research or collection.

FS-2800-22B, Authorization to Conduct Paleontological Resources Research or Collection, which is used by the Forest Service to collection information for and to establish stipulations for the performance of authorized activities related to paleontological resources research or collection.

FS-2800-22C, Paleontological Investigation Report Form, which is used by the Forest Service to collect information for and to complete a paleontological investigation report.

FS-2800-22D, Paleontological Specimen Data Form, which is used by the Forest Service to collect information regarding paleontological specimens.

The following special use authorization forms are being removed from the ICR because they are no longer needed:

Stanislaus FS-2300-1A, Tuolumne Wild and Scenic River Permit, which is used by the Forest Service to collect information for and to authorize temporary use of the Tuolumne Wild and Scenic River. This use is administered under the Forest Service's National Recreation Fee Program via the *Recreation.gov* website.

Stanislaus FS-2300-1B, Cherry Creek Self-Registration Permit, which is used by the Forest Service to collect information for and to authorize temporary use of the Cherry Creek River. This use is administered under the Forest Service's National Recreation Fee Program via the *Recreation.gov* website.

FS-2300-3e, Special Use Application and Permit for Government-Owned Buildings, which is used by the Forest Service to collect information for and to authorize noncommercial use of Federally owned facilities on NFS lands. This use is administered under the Forest Service's National Recreation Fee Program via the *Recreation.gov* website.

FS-2700-4h, Appendix F, Operation of Federally Owned Drinking Water Systems, duplicates FS-2700-4h, Appendix G, Special Use Permit for Campground and Related Granger-Thye Concessions, Operation of Federally Owned Drinking Water Systems.

Form W-9, Request for Taxpayer Identification Number and Certification, is an Internal Revenue Service (IRS) form, and per IRS guidance, this form is exempt from the Paperwork Reduction Act.

Forest Service Manual 2720 and FSH 2709.11, Chapters 10, 40, 50, and 90, will be revised as needed to conform with the revisions to the ICR.

All comments received in response to this notice, including names and addresses when provided, will be a matter of public record. Comments will be summarized and included in the package submitted to the Office of Management and Budget for reapproval of the ICR as revised.

Dated: October 1, 2024.

Jacqueline Emanuel,
Associate Deputy Chief, National Forest System.

[FR Doc. 2024-23216 Filed 10-7-24; 8:45 am]

BILLING CODE 3411-15-P

DEPARTMENT OF COMMERCE

International Trade Administration

[A-570-875]

Non-Malleable Cast Iron Pipe Fittings From the People's Republic of China: Final Results of Expedited Fourth Sunset Review of Antidumping Duty Order

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: As a result of this sunset review, the U.S. Department of Commerce (Commerce) finds that revocation of the antidumping duty order on non-malleable cast iron pipe fittings (pipe fittings) from the People's Republic of China (China) would be likely to lead to continuation or recurrence of dumping at the levels identified in the "Final Results of Sunset Review" section of this notice.

DATES: Applicable October 8, 2024.

FOR FURTHER INFORMATION CONTACT: Thomas Martin, AD/CVD Operations, Office IV, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482-3936.

SUPPLEMENTARY INFORMATION:

Background

On April 7, 2003, the Commerce published the notice of the antidumping duty order on pipe fittings from China.¹ On June 3, 2024, Commerce published the initiation of the fourth sunset review of the *Order*, pursuant to section 751(c) of the Tariff Act of 1930, as amended (the Act).² On June 14, 2024, Commerce received a notice of intent to participate in this review from Anvil International, LLC and Ward Manufacturing LLC (collectively, the petitioners), domestic interested parties, within the deadline specified in 19 CFR 351.218(d)(1)(i).³ The petitioners claimed interested party status under section 771(9)(C) of the Act as U.S. manufacturers or producers of a domestic like product. On July 2, 2024, Commerce received a complete and adequate substantive response from the petitioners within the 30-day deadline specified in 19 CFR 351.218(d)(3)(i).⁴

¹ See *Notice of Antidumping Order: Non-Malleable Cast Iron Pipe Fittings from the People's Republic of China*, 68 FR 16765 (April 7, 2003) (*Order*).

² See *Initiation of Five-Year (Sunset) Review*, 89 FR 47525 (June 3, 2024).

³ See Petitioners' Letter, "Domestic Interested Party Notice of Intent To Participate," dated June 14, 2024.

⁴ See Petitioners' Letter, "Domestic Industry Parties Substantive Response," dated July 2, 2024.

Commerce received no substantive responses from respondent interested parties. As a result, pursuant to section 751(c)(3)(B) of the Act and 19 CFR 351.218(e)(1)(ii)(C)(2), Commerce conducted an expedited (120-day) sunset review of the *Order*. On July 22, 2024, Commerce tolled certain deadlines in this administrative proceeding by seven days.⁵ The deadline for the final results is now October 8, 2024.

Scope of the Order

The products covered by the *Order* are finished and unfinished non-malleable cast iron pipe fittings with an inside diameter ranging from ¼ inch to 6 inches, whether threaded or unthreaded, regardless of industry or proprietary specifications. Imports of covered merchandise are classifiable in the Harmonized Tariff Schedule of the United States (HTSUS) under item numbers 7307.11.00.30, 7307.11.00.60, 7307.19.30.60 and 7307.19.30.85. HTSUS subheadings are provided for convenience and customs purposes. The written description of the scope of the *Order* is dispositive. For a complete description of the scope of the *Order*, see the Issues and Decision Memorandum.⁶

Analysis of Comments Received

All issues raised in this sunset review are addressed in the Issues and Decision Memorandum. A list of topics discussed in the Issues and Decision Memorandum is included in the appendix to this notice. The Issues and Decision Memorandum is a public document and is on file electronically via the Enforcement and Compliance's Antidumping and Countervailing Duty Centralized Electronic Service System (ACCESS). ACCESS is available to registered users at <https://access.trade.gov>. In addition, a complete version of the Issues and Decision Memorandum can be accessed directly at <https://access.trade.gov/public/FRNoticesListLayout.aspx>.

Final Results of Sunset Review

Pursuant to sections 751(c)(1) and 752(c)(1) and (3) of the Act, Commerce determines that revocation of the *Order* would likely lead to continuation or recurrence of dumping, and that the

⁵ See Memorandum, "Tolling of Deadlines for Antidumping and Countervailing Duty Proceedings," dated July 22, 2024.

⁶ See Memorandum, "Issues and Decision Memorandum for the Final Results of the Expedited Fourth Sunset Review of the Antidumping Duty Order on Non-Malleable Cast Iron Pipe Fittings from the People's Republic of China," dated concurrently with, and hereby adopted by, this notice (Issues and Decision Memorandum).

magnitude of the dumping margins likely to prevail would be up to 75.50 percent.

Administrative Protective Order

This notice serves as the only reminder to parties subject to an administrative protective order (APO) of their responsibility concerning the return or destruction of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a). Timely notification of the return or destruction of APO materials or conversion to judicial protective order, is hereby requested. Failure to comply with the regulations and terms of an APO is a violation which is subject to sanction.

Notification to Interested Parties

We are issuing and publishing the final results and this notice in accordance with sections 751(c), 752(c), and 777(i)(1) of the Act, and 19 CFR 351.218(e)(1)(ii)(C)(2) and 19 CFR 351.221(c)(5)(ii).

Dated: September 3, 2024.

Ryan Majerus,

Deputy Assistant Secretary for Policy and Negotiations, performing the non-exclusive functions and duties of the Assistant Secretary for Enforcement and Compliance.

Appendix—List of Topics Discussed in the Issues and Decision Memorandum

- I. Summary
- II. Background
- III. Scope of the Order
- IV. History of the Order
- V. Legal Framework
- VI. Discussion of the Issues
 1. Likelihood of Continuation or Recurrence of Dumping
 2. Magnitude of the Margins of Dumping Likely to Prevail
- VII. Final Results of Sunset Review
- VIII. Recommendation

[FR Doc. 2024–23198 Filed 10–7–24; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–570–170]

Aluminum Containers, Pans, Trays, and Lids from the People's Republic of China: Postponement of Preliminary Determination in the Less-Than-Fair Value Investigation

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

DATE: Applicable October 8, 2024.

FOR FURTHER INFORMATION CONTACT: Matthew Palmer or Kate Fracke, AD/

CVD Operations, Office III, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–1678 or (202) 482–3299, respectively.

SUPPLEMENTARY INFORMATION:

Background

On June 5, 2024, the U.S. Department of Commerce (Commerce) initiated a less-than-fair-value (LTFV) investigation of imports of aluminum containers, pans, trays, and lids from the People's Republic of China.¹ On July 22, 2024, Commerce tolled certain deadlines in this administrative proceeding by seven days.² Currently, the preliminary determination is due no later than October 30, 2024.

Postponement of Preliminary Determination

Section 733(b)(1)(A) of the Tariff Act of 1930, as amended (the Act), requires Commerce to issue the preliminary determination in an LTFV investigation within 140 days after the date on which Commerce initiated the investigation. However, section 733(c)(1) of the Act permits Commerce to postpone the preliminary determination until no later than 190 days after the date on which Commerce initiated the investigation if: (A) the petitioner makes a timely request for a postponement; or (B) Commerce concludes that the parties concerned are cooperating, that the investigation is extraordinarily complicated, and that additional time is necessary to make a preliminary determination. Under 19 CFR 351.205(e), the petitioner must submit a request for postponement 25 days or more before the scheduled date of the preliminary determination and must state the reasons for the request. Commerce will grant the request unless it finds compelling reasons to deny the request.

On September 25, 2024, the petitioners³ submitted a timely request that Commerce postpone the preliminary determination in the LTFV

¹ See *Disposable Aluminum Containers, Pans, Trays, and Lids from the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, 89 FR 49837 (June 12, 2024).

² See Memorandum, “Tolling of Deadlines for Antidumping and Countervailing Duty Proceedings,” dated July 22, 2024.

³ The petitioners are the Aluminum Foil Container Manufacturers Association and the following individual member companies: Durable Packaging International; D&W Fine Pack, LLC; Handi-foil Corp.; Penny Plate, LLC; Reynolds Consumer Products, LLC; Shah Foil Products, Inc.; Smart USA, Inc.; and Trinidad/Benham Corp (collectively, the petitioners).

investigation.⁴ The petitioners stated that they requested postponement because “while the one participating mandatory respondent in this proceeding has submitted most of its initial responses to {Commerce’s} antidumping questionnaire, Petitioners have identified deficiencies in these responses that must be remedied in advance of {Commerce’s} issuance of its preliminary determination.”⁵

For the reason stated above and because there are no compelling reasons to deny the request, Commerce, in accordance with section 733(c)(1)(A) of the Act, is postponing the deadline for the preliminary determination by 50 days (*i.e.*, 190 days after the date on which this investigation was initiated). As a result, Commerce will issue its preliminary determination no later than December 19, 2024.⁶ In accordance with section 735(a)(1) of the Act and 19 CFR 351.210(b)(1), the deadline for the final determination of this investigation will continue to be 75 days after the date of the preliminary determination, unless postponed at a later date.

This notice is issued and published pursuant to section 733(c)(2) of the Act and 19 CFR 351.205(f)(1).

Dated: October 2, 2024.

Ryan Majerus,

Deputy Assistant Secretary for Policy and Negotiations performing the non-exclusive functions and duties of the Assistant Secretary for Enforcement and Compliance.

[FR Doc. 2024–23245 Filed 10–7–24; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–580–880]

Heavy Walled Rectangular Welded Carbon Steel Pipes and Tubes From the Republic of Korea: Preliminary Results and Rescission of Antidumping Duty Administrative Review, in Part; 2022–2023

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: The U.S. Department of Commerce (Commerce) preliminarily finds that heavy walled rectangular welded carbon steel pipes and tubes (HWRPT) from the Republic of Korea (Korea) were not sold at less than

⁴ See Petitioners’ Letter, “Petitioners’ Request for Postponement of the Preliminary Determination,” dated September 25, 2024.

⁵ *Id.*

⁶ This deadline has been tolled by seven days. See fn2, *supra*.

normal value during the period of review (POR) September 1, 2022, through August 31, 2023. In addition, Commerce is rescinding this administrative review in part, with respect to two companies for which the request for review was timely withdrawn. We invite interested parties to comment on these preliminary results of review.

DATES: Applicable October 8, 2024.

FOR FURTHER INFORMATION CONTACT: Samantha Kinney, AD/CVD Operations, Office II, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–2285.

SUPPLEMENTARY INFORMATION:

Background

On September 13, 2016, Commerce published in the **Federal Register** the antidumping duty order on HWRPT from Korea.¹ On September 6, 2023, Commerce published in the **Federal Register** a notice of opportunity to request an administrative review of the *Order*.² On November 15, 2023, based on timely requests for review, in accordance with 19 CFR 351.221(c)(1)(i), we initiated an antidumping duty administrative review of three producers and exporters of the subject merchandise.³ On November 16 and 17, 2023, respectively, NEXTEEL Co., Ltd. (NEXTEEL) and Dong-A-Steel Co., Ltd. (DOSCO) withdrew their requests for an administrative review.⁴ The sole company remaining subject to this review is HiSteel Co., Ltd. (HiSteel).

On May 9, 2024, Commerce extended the deadline for the preliminary results of this review until September 25, 2025.⁵ On July 22, 2024, Commerce tolled certain deadlines in this administrative proceeding by seven

days.⁶ The deadline for the preliminary results is now October 2, 2024. For a complete description of the events that followed the initiation of this review, see the Preliminary Decision Memorandum.⁷

Scope of the Order

The merchandise subject to the *Order* is certain heavy walled rectangular welded steel pipes and tubes from Korea. For a full description of the scope of the *Order* see Preliminary Decision Memorandum.

Methodology

Commerce is conducting this review in accordance with sections 751(a)(1)(B) and (2) of the Tariff Act of 1930, as amended (the Act). Constructed export price is calculated in accordance with section 772 of the Act. Normal value is calculated in accordance with section 773 of the Act. For a full description of the methodology underlying our conclusions, see the Preliminary Decision Memorandum. A list of topics discussed in the Preliminary Decision Memorandum is attached as an appendix to this notice. The Preliminary Decision Memorandum is a public document and is on file electronically via Enforcement and Compliance’s Antidumping and Countervailing Duty Centralized Electronic Service System (ACCESS). ACCESS is available to registered users at <https://access.trade.gov>. In addition, a complete version of the Preliminary Decision Memorandum can be accessed directly at <https://access.trade.gov/public/FRNoticesListLayout.aspx>.

Rescission of Review, In Part

Pursuant to 19 CFR 351.213(d)(1), Commerce will rescind an administrative review, in whole or in part, if a party who requested the review withdraws the request within 90 days of the date of publication of the notice of initiation of the requested review. On November 16 and 17, 2023, respectively, NEXTEEL and DOSCO withdrew their requests for an administrative review.⁸ Because no other parties requested a review of these two companies, we are rescinding the administrative review in

part, with respect to these two companies.

Preliminary Results of Review

As a result of this review, we preliminarily determine that the following weighted-average dumping margin exists for the period September 1, 2022 through August 31, 2023:

Producer/exporter	Weighted-average dumping margin (percent)
HiSteel Co., Ltd	0.00

Disclosure and Public Comment

Commerce intends to disclose its calculations and analysis performed for these preliminary results to interested parties within five days after public announcement, or if there is no public announcement, within five days of the date of publication of this notice in the **Federal Register**.⁹

Interested parties may submit case briefs to Commerce no later than 30 days after the date of publication of this notice.¹⁰ Rebuttal briefs, limited to issues raised in the case briefs, may be filed no later than five days after the date for filing case briefs.¹¹ Interested parties who submit case or rebuttal briefs in this proceeding must submit: (1) a table of contents listing each issue; and (2) a table of authorities.¹²

As provided under 19 CFR 351.309(c)(2) and (d)(2), in prior proceedings we have encouraged interested parties to provide an executive summary of their brief that should be limited to five pages total, including footnotes. In this administrative review, we instead request that interested parties provide at the beginning of their briefs a public, executive summary for each issue raised in their briefs.¹³ Further, we request that interested parties limit their public executive summary of each issue to no more than 450 words, not including citations. We intend to use the public executive summaries as the basis of the comment summaries included in the issues and decision memorandum that will accompany the final results in this

¹ See *Heavy Walled Rectangular Welded Carbon Steel Pipes and Tubes from the Republic of Korea, Mexico, and the Republic of Turkey: Antidumping Duty Orders*, 81 FR 62865 (September 13, 2016) (*Order*).
² See *Antidumping or Countervailing Duty Order, Finding, or Suspended Investigation: Opportunity to Request Administrative Review and Join Annual Inquiry Service List*, 88 FR 60923 (September 6, 2023).
³ See *Initiation of Antidumping and Countervailing Duty Administrative Reviews*, 88 FR 78298, 78300 (November 15, 2023).
⁴ See NEXTEEL’s Letter, “Withdrawal of Request for Administrative Review,” dated November 16, 2023 (NEXTEEL’s Withdrawal Request); see also DOSCO’s Letter, “Withdrawal of Request for Administrative Review for DOSCO,” dated November 17, 2023 (DOSCO’s Withdrawal Request).
⁵ See Memorandum, “Extension of Deadline for Preliminary Results of Antidumping Duty Administrative Review,” dated May 9, 2024.

⁶ See Memorandum, “Tolling of Deadlines for Antidumping and Countervailing Duty Proceedings,” dated July 22, 2024.
⁷ See Memorandum, “Decision Memorandum for the Preliminary Results of the Administrative Review of the Antidumping Duty Order on Heavy Walled Rectangular Welded Carbon Steel Pipes and Tubes from the Republic of Korea: 2022–2023,” dated concurrently with, and hereby adopted by, this notice (Preliminary Decision Memorandum).
⁸ See NEXTEEL’s Withdrawal Request; see also DOSCO’s Withdrawal Request.

⁹ See 19 CFR 351.224(b).
¹⁰ See 19 CFR 351.303 (for general filing requirements).
¹¹ See 19 CFR 351.309(d); see also *Administrative Protective Order, Service, and Other Procedures in Antidumping and Countervailing Duty Proceedings*, 88 FR 67069, 67077 (September 29, 2023) (*APO and Service Procedures*).
¹² See 19 CFR 351.309(c)(2) and (d)(2).
¹³ We use the term “issue” here to describe an argument that Commerce would normally address in a comment of the Issues and Decision Memorandum.

administrative review. We request that interested parties include footnotes for relevant citations in the public executive summary of each issue. Note that Commerce has amended certain of its requirements pertaining to the service of documents in 19 CFR 351.303(f).¹⁴

Pursuant to 19 CFR 351.310(c), interested parties who wish to request a hearing, must submit a written request to the Assistant Secretary for Enforcement and Compliance, filed electronically via ACCESS. Hearing requests should contain: (1) the party's name, address, and telephone number; (2) the number of participants; and (3) a list of issues to be discussed. Issues raised in the hearing will be limited to those raised in the respective case briefs. A hearing request must be received within 30 days after the date of publication of this notice. If a request for a hearing is made, Commerce intends to hold a hearing at a time and date to be determined and will notify the parties through ACCESS.¹⁵ Parties should confirm the date, time, and location of the hearing two days before the scheduled date.

All submissions, including case and rebuttal briefs, as well as hearing requests, should be filed using ACCESS.¹⁶ An electronically-filed document must be received successfully in its entirety by ACCESS by 5:00 p.m. Eastern Time on the established deadline.

Assessment Rates

Pursuant to section 751(a)(2)(A) of the Act, upon completion of the final results of this administrative review, Commerce shall determine, and U.S. Customs and Border Protection (CBP) shall assess, antidumping duties on all appropriate entries of subject merchandise covered by this review.¹⁷

For the companies for which this review is being rescinded, in part, Commerce will instruct CBP to assess antidumping duties on all appropriate entries. Antidumping duties shall be assessed at rates equal to the cash deposit rate for estimated antidumping duties required at the time of entry, or withdrawal from warehouse, for consumption, in accordance with 19 CFR 351.212(c)(1)(i). With respect to the rescission of this review, in part, Commerce intends to issue assessment instructions to CBP no earlier than 35 days after the date of publication of this notice in the **Federal Register**.

Pursuant to 19 CFR 351.212(b)(1), if the weighted-average dumping margin for HiSteel is not zero or *de minimis* (i.e., less than 0.5 percent) in the final results of this review, Commerce intends to calculate importer-specific *ad valorem* assessment rates based on the ratio of the total amount of dumping calculated for each importer's examined sales to the total entered value of those sales. If HiSteel's weighted-average dumping margin is zero or *de minimis* within the meaning of 19 CFR 351.106(c)(1), or an importer-specific *ad valorem* assessment rate is zero or *de minimis* in the final results of review, we intend to instruct CBP to liquidate the appropriate entries without regard to antidumping duties.¹⁸ The final results of this administrative review shall be the basis for the assessment of antidumping duties on entries of merchandise covered by the final results of this review and for future deposits of estimated duties, where applicable.¹⁹

For entries of subject merchandise during the POR produced by HiSteel for which it did not know that the merchandise was destined for the United States, we intend to instruct CBP to liquidate unreviewed entries at the all-others rate (i.e., 3.24 percent) in the original less than fair value (LTFV) investigation²⁰ if there is no rate for the intermediate company(ies) involved in the transaction.²¹

Commerce intends to issue assessment instructions to CBP no earlier than 35 days after the date of publication of the final results of this review in the **Federal Register**. If a timely summons is filed at the U.S. Court of International Trade, the assessment instructions will direct CBP not to liquidate relevant entries until the time for parties to file a request for a statutory injunction has expired (i.e., within 90 days of publication).

Cash Deposit Requirements

The following deposit requirements will be effective upon publication in the **Federal Register** of the notice of final results of this administrative review for all shipments of the subject merchandise entered, or withdrawn from warehouse, for consumption on or after the date of publication, as provided

by section 751(a)(2)(C) of the Act: (1) the cash deposit rate for HiSteel will be equal to the weighted-average dumping margin established in the final results of this review, except if the rate is less than 0.50 percent and, therefore, *de minimis* within the meaning of 19 CFR 351.106(c)(1), in which case the cash deposit rate will be zero; (2) for previously reviewed or investigated companies not participating in this review, the cash deposit rate will continue to be the company-specific rate published for the most recently-completed segment of this proceeding in which the company was reviewed; (3) if the exporter is not a firm covered in this review, a prior review, or the LTFV investigation, but the producer is, then the cash deposit rate will be the cash deposit rate established in the completed segment for the most recent period for the producer of the merchandise; and (4) the cash deposit rate for all other producers or exporters will continue to be 3.24 percent, the all-others rate established in the LTFV investigation.²² These deposit requirements, when imposed, shall remain in effect until further notice.

Final Results of Review

Unless the deadline is otherwise extended, Commerce intends to issue the final results of this administrative review, including the results of its analysis of issues raised by interested parties in the written comments, within 120 days of publication of these preliminary results in the **Federal Register**.²³

Notification to Importers

This notice serves as a preliminary reminder to importers of their responsibility under 19 CFR 351.402(f)(2) to file a certificate regarding the reimbursement of antidumping duties prior to liquidation of the relevant entries during this review period. Failure to comply with this requirement could result in Commerce's presumption that reimbursement of antidumping duties occurred and the subsequent assessment of double antidumping duties.

Notification to Interested Parties

We are issuing and publishing these preliminary results in accordance with sections 751(a)(1) and 777(i)(1) of the Act, and 19 CFR 351.221(b)(4).

¹⁴ See *APO and Service Procedures*.

¹⁵ See 19 CFR 351.310(d).

¹⁶ See 19 CFR 351.303.

¹⁷ See 19 CFR 351.212(b)(1).

¹⁸ See 19 CFR 351.106(c)(2); see also *Antidumping Proceedings: Calculation of the Weighted-Average Dumping Margin and Assessment Rate in Certain Antidumping Proceedings; Final Modification*, 77 FR 8101, 8103 (February 14, 2012).

¹⁹ See section 751(a)(2)(C) of the Act.

²⁰ See *Order*, 81 FR at 62865.

²¹ For a full discussion of this practice, see *Antidumping and Countervailing Duty Proceedings: Assessment of Antidumping Duties*, 68 FR 23954 (May 6, 2003).

²² See *Order*.

²³ See section 751(a)(3)(A) of the Act; see also 19 CFR 351.213(h).

Dated: October 2, 2024.

Ryan Majerus,

Deputy Assistant Secretary for Policy and Negotiations, performing the non-exclusive functions and duties of the Assistant Secretary for Enforcement and Compliance.

Appendix

List of Topics Discussed in the Preliminary Decision Memorandum

- I. Summary
- II. Background
- III. Scope of the Order
- IV. Rescission of Administrative Review, In Part
- V. Discussion of the Methodology
- VI. Currency Conversion
- VII. Recommendation

[FR Doc. 2024–23265 Filed 10–7–24; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

[Docket No.: 240924–0252]

Existing Awards and Recognition Programs for Standards Development and Best Practices for Standards Workforce Development in Support of the Implementation of the United States Government National Standards Strategy for Critical and Emerging Technology (USG NSSCET)

AGENCY: National Institute of Standards and Technology (NIST), Commerce.

ACTION: Notice; request for information.

SUMMARY: The U.S. Government National Standards Strategy for Critical and Emerging Technology (USG NSSCET) supports and complements existing private sector-led activities and plans, including the American National Standards Institute (ANSI) United States Standards Strategy (USSS), with a focus on critical and emerging technology (CET). The USG NSSCET Implementation Roadmap outlines immediate and long-term U.S. Government actions to reinforce the U.S. standards system. This Request for Information (RFI) solicits information to inform the Implementation Roadmap actions focused on increasing U.S. participation in standards development and educating the standards workforce. The RFI is also intended to maintain an open dialogue with the CET standards community on opportunities for continued coordination.

DATES: Comments must be received by 5:00 p.m. Eastern Time on December 9, 2024. Submissions received after that date may not be considered in the analysis of this RFI. Public input on general USG NSSCET implementation

coordination activities will be accepted on an on-going basis via www.standards.gov.

ADDRESSES: Comments must be submitted via www.regulations.gov:

- To submit electronic public comments via the Federal e-Rulemaking Portal.

1. Go to www.regulations.gov and enter [NIST–2024–0003] in the search field.

2. Click the “Comment Now!” icon and complete the required fields.

3. Enter or attach your comments.

Comments containing references, studies, research, and other empirical data that are not widely published should include copies of the referenced materials. All submissions, including comments, attachments and other supporting materials, will become part of the public record and subject to public disclosure. Relevant comments will generally be available on the Federal eRulemaking Portal at www.regulations.gov. After the comment period closes, relevant comments will generally be available on www.standards.gov. NIST will not accept comments accompanied by a request that part or all of the material be treated confidentially because of its business proprietary nature or for any other reason. Therefore, do not submit confidential business information or otherwise sensitive, protected, or personal information, such as account numbers, Social Security numbers, or names of other individuals.

FOR FURTHER INFORMATION CONTACT: For questions about this notice please contact: Standards Coordination Office (SCO), NIST via email at sco@nist.gov or by phone at (301) 975–5633. Please direct all media inquiries to Richard Press in the NIST Public Affairs Office via email at richard.press@nist.gov or by phone at (301) 975–0501.

SUPPLEMENTARY INFORMATION: NIST is seeking information on behalf of the U.S. Department of Commerce and the U.S. Government to support the implementation of the May 2023 USG NSSCET (found at <https://www.whitehouse.gov/wp-content/uploads/2023/05/US-Gov-National-Standards-Strategy-2023.pdf>), which complements existing private sector-led activities and plans, including the ANSI USSS, with a focus on CET. A full list of CETs identified by the National Science and Technology Council (NSTC) can be found at <https://www.whitehouse.gov/wp-content/uploads/2022/02/02-2022-Critical-and-Emerging-Technologies-List-Update.pdf>.

The U.S. standards development system is unique because it is built

upon a wide variety of processes that are open, voluntary, decentralized, and led by the private sector. These processes feature participation by interested stakeholders with consensus-based decision-making. Finalized standards are primarily published by private sector standards organizations, not the U.S. Government. The USG NSSCET reinforces the U.S. Government’s support of a private sector-led system based on principles that are fundamental to the development of international standards: transparency, openness, impartiality and consensus, effectiveness and relevance, and coherence.

The USG developed the USG NSSCET Implementation Roadmap (https://www.whitehouse.gov/wp-content/uploads/2024/07/USG-NSSCET-Implementation-Rdmap_v7_23.pdf), which provides immediate and long-term actions for the U.S. Government to reinforce its support for the U.S. standards system, to operationalize the strategy. Released in July 2024, the Implementation Roadmap is based on the findings from a broad stakeholder engagement campaign that included input from workshops, meetings, a USG NSSCET-focused RFI (88 FR 76187 (Nov. 6, 2023)), and a study conducted by the NIST Visiting Committee on Advance Technology (https://www.nist.gov/system/files/documents/2024/04/09/VCAT%20Subcommittee%20on%20International%20Standards%20Report%202024_FINAL_1.pdf).

An area of focus during the stakeholder engagement conducted to inform the USG NSSCET Implementation Roadmap was the identification of barriers to increased participation in standards development. Engaging and recognizing early and mid-career standards development professionals through education and meaningful acknowledgment was a key theme identified by stakeholders. Another key theme was the critical role of business and technology decision-makers in helping drive engagement in standards development and the need to educate these leaders on why, how, and when to engage. NIST is now seeking information through this RFI to further inform how the U.S. Government addresses these key themes during implementation.

The national interest in CET and associated areas of standardization demands a new and urgent level of coordination and effort. National policy priorities, as expressed in legislation and other statements of policy, will require new ways for public sector and private sector (*i.e.*, industry, including start-ups and small- and medium-sized

enterprises (SMEs), the academic community, and civil society organizations) stakeholders to cooperate in order to advance U.S. economic competitiveness and national security.

In this RFI, NIST is seeking information about existing awards and recognition programs that can be leveraged by the U.S. Government and U.S. standards community to encourage and support standards participation and leadership in CET areas in alignment with the actions called out in the USG NSSCET Implementation Roadmap. NIST is also requesting information that will help inform the work of the U.S. Government and the U.S. standards community to educate and empower the standards workforce and business and technology decision-makers. Finally, NIST is seeking to maintain an open dialogue and sustained communication with the U.S. CET and standards communities regarding the ongoing implementation of the roadmap. Information gathered through this RFI and other stakeholder engagements will support key activities to optimize the USG NSSCET impact and further enhance the U.S. Government's ability to support a private sector-led, open, consensus-based international standards system in which the U.S. Government is an active stakeholder and participant.

NIST is requesting comments on the following questions and encourages responses from the public, including key stakeholders from the private sector (*i.e.*, industry, including start-ups and SMEs, the academic community, professional societies, and civil society organizations), standards developing organizations (SDOs), and international standards community.

The questions on awards and recognition, as well as on workforce development, address specific aspects of the USG NSSCET where further input from the stakeholder community will help the short- and long-term outcomes in the implementation roadmap. The inclusion of these two topics on this RFI is not intended to indicate a particular relationship between the two topics, nor are they intended to limit the topics that may be addressed by the public in response to this RFI. Responses to the open feedback question may include any topic believed to have implications for the ongoing implementation.

When responding, commenters may address the practices of their organization(s) or a group of organizations with which they are familiar. Commenters may also provide information about the type, size, and location of the organization(s). Provision of such information is optional and will not affect NIST's consideration.

Existing Awards and Recognition Programs for Standards Development

1. How can the U.S. Government and the U.S. standards community leverage existing awards and recognition programs or establish new programs to support standards participation and leadership in CET areas?

2. What types of awards and recognition programs for standards development further standards engagement, especially with respect to CET?

Best Practices for Standards Workforce Development

1. What types of support could improve professional development for early-career professionals, mid-career professionals, or those who are new to standards development?

2. What type of educational outreach to business and technology decision-makers on why, how, and when to engage in standards development could increase their engagement?

3. How can the U.S. Government and the U.S. standards community more effectively work together to share best practices for standards workforce development?

Open Feedback on the Implementation of the USG NSSCET

1. Please describe any additional observations of how the U.S. Government can effectively implement the vision set forth in the USG NSSCET and associated Implementation Roadmap.

Alicia Chambers,

NIST Executive Secretariat.

[FR Doc. 2024-23174 Filed 10-7-24; 8:45 am]

BILLING CODE 3510-13-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XE162]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to a Marine Geophysical Survey in the Nauru Basin of Greater Micronesia in the Northwest Pacific Ocean

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments on proposed authorization and possible renewal.

SUMMARY: NMFS received a request from the Scripps Institution of Oceanography (SIO) for authorization to take marine mammals incidental to a marine geophysical survey in the Nauru Basin of greater Micronesia in the northwest (NW) Pacific Ocean. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-time, 1-year renewal that could be issued under certain circumstances and if all requirements are met, as described in Request for Public Comments at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than November 7, 2024.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service and should be submitted via email to ITP.wachtendonk@noaa.gov. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-research-and-other-activities>. In case of problems accessing these documents, please call the contact listed below.

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act> without change. All personal identifying information (*e.g.*, name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Rachel Wachtendonk, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the “take” of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specific geographic region if certain findings are made and either regulations are proposed or, if the taking is limited to harassment, a notice of a proposed IHA is provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other “means of effecting the least practicable adverse impact” on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stocks for taking for certain subsistence uses (referred to in shorthand as “mitigation”); and requirements pertaining to the monitoring and reporting of the takings. The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must review our proposed action (*i.e.*, the issuance of an IHA) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NAO 216–

6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

Summary of Request

On June 6, 2024, NMFS received a request from the Scripps Institution of Oceanography (SIO) for an IHA to take marine mammals incidental to a marine geophysical survey in the Nauru Basin of greater Micronesia in the northwest (NW) Pacific Ocean. The application was deemed adequate and complete on July 30, 2024. SIO’s request is for take of 27 species of marine mammals, by Level B harassment only. Neither SIO nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

Description of Proposed Activity

Overview

Researchers from the Woods Hole Oceanographic Institution (WHOI) and University of Houston, with funding from the National Science Foundation (NSF), and implementation by SIO, propose to conduct a low-energy marine seismic survey using airguns as the acoustic source from the research vessel (R/V) *Sikuliaq* (*Sikuliaq*), which is owned by NSF and operated by the University of Alaska Fairbanks (UAF). The proposed survey would occur in the Nauru Basin of greater Micronesia in the NW Pacific Ocean from approximately December 2024 to January 2025. The proposed survey would occur in International Waters and within the Exclusive Economic Zone (EEZ) of the Republic of Marshall Islands, in water depths ranging from approximately 4,000–6,000 meters (m). To complete this 2-dimensional (2–D) multi-channel seismic (MCS) reflection survey, the *Sikuliaq* would tow a 4-airgun array with a total discharge volume of ~420 cubic inches (in³) at a depth of 3 m,

operated by marine technicians from SIO. The airgun array receiver would consist of a 1,200 m long solid-state hydrophone streamer. The airguns would fire at a shot interval of 30 m. Approximately 3,158 kilometers (km) of seismic acquisition is planned. Airgun arrays would introduce underwater sounds that may result in take, by Level B harassment, of marine mammals.

The purpose of the proposed survey is to examine magnetic reversals to help determine the process that causes changes in the Earth’s magnetic field. The proposed seismic surveys are a prerequisite for processing magnetic data, as they will provide crucial information on the structure of the oceanic crust that is used to model the source of the magnetic signals.

Dates and Duration

The R/V *Sikuliaq* would likely mobilize from Honolulu, Hawaii, on December 7, 2024, and demobilize in Pohnpei, Federated States of Micronesia, on January 6, 2025, after the survey is completed. The survey is expected to last 27 days, including approximately 14 days of seismic operations and 13 days of transit.

Specific Geographic Region

The proposed survey would occur within approximately 6–20° N, 154–167° E, in International Waters and within the EEZ of the Republic of Marshall Islands, in water depths ranging from approximately 4,000 to 6,000 m. The region where the survey is proposed to occur is depicted in figure 1; the tracklines could occur anywhere within the polygon shown in figure 1. Representative survey tracklines are shown; however, some deviation in actual tracklines, including the order of survey operations, could be necessary for reasons such as science drivers, poor data quality, inclement weather, or mechanical issues with the research vessel and/or equipment. The R/V *Sikuliaq* would likely mobilize from Honolulu, Hawaii and demobilize in Pohnpei, Federated States of Micronesia.

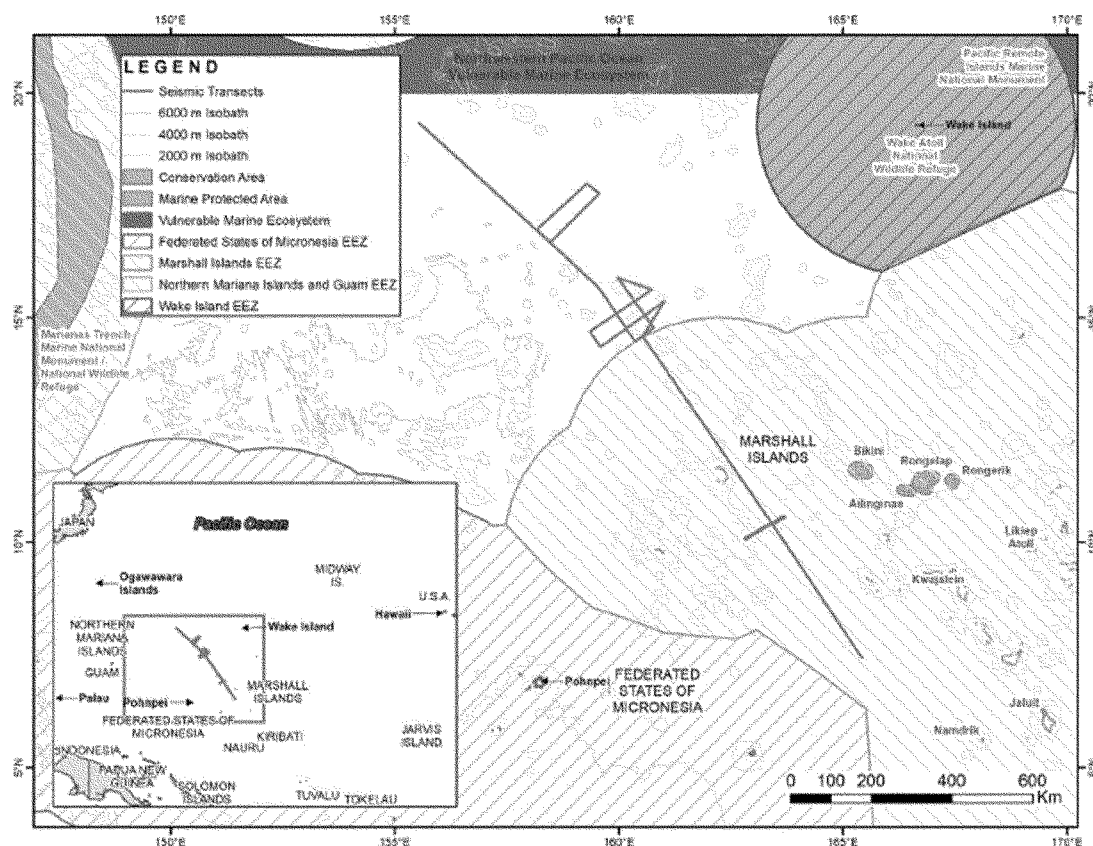


Figure 1—Location of the Proposed Seismic Survey in the Nauru Basin of Greater Micronesia in the NW Pacific Ocean

Representative survey tracklines are included in the figure; however, the tracklines could occur anywhere within the survey area.

Detailed Description of the Specified Activity

The procedures to be used for the proposed survey would be similar to those used during previous seismic surveys by SIO and would use conventional seismic methodology. The survey would involve one source vessel, R/V *Sikuliaq*, which is owned by NSF and operated by UAF. During the low-energy MCS seismic reflection survey, R/V *Sikuliaq* would tow two strings, each with two Generator-Injector (GI) airguns. During the survey, both strings, totaling four active airguns with a total discharge volume of 420 in³, would be used. The two airgun strings would be spaced 11 m apart and would be towed approximately 25 m behind the vessel. The airgun array configurations are illustrated in figure 2–11 of NSF and the U.S. Geological Survey's (USGS) Programmatic Environmental Impact Statement (PEIS; NSF–USGS, 2011). (The PEIS is available online at: [https://www.nsf.gov/geo/oce/envcomp/usgs-](https://www.nsf.gov/geo/oce/envcomp/usgs-nsf-marine-seismic-research/nsf-usgs-final-eis-ois_3june2011.pdf)

[nsf-marine-seismic-research/nsf-usgs-final-eis-ois_3june2011.pdf](https://www.nsf.gov/geo/oce/envcomp/usgs-nsf-marine-seismic-research/nsf-usgs-final-eis-ois_3june2011.pdf)). The receiving system would consist of a 1,200 m long solid-state hydrophone streamer. As the airgun arrays are towed along the survey lines, the hydrophone streamer would transfer the data to the on-board processing system.

Approximately 3,158 km of seismic acquisition are planned. The survey would take place in water depths ranging from approximately 4,000 to 6,000 m. In addition to the operations of the airgun array, the ocean floor would be mapped with the Kongsberg EM 304 and the Kongsberg EM 710 multibeam echosounder (MBES), and a Knudsen Chirp 3260 sub-bottom profiler (SBP). A Teledyne RDI 75 kilohertz (kHz) Ocean Surveyor Acoustic Doppler Current Profiler (ADCP) would be used to measure water current velocities, and a passive sea surface magnetometer and a shipboard gravimeter would also be used. Take of marine mammals is not expected to occur incidental to use of the MBES, SBP, and ADCP, whether or not the airguns are operating simultaneously with the other sources. Given their characteristics (e.g., narrow downward-directed beam), marine mammals would experience no more than one or two brief ping exposures, if any exposure were to occur. NMFS does not expect that the use of these sources

presents any reasonable potential to cause take of marine mammals.

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see Proposed Mitigation and Proposed Monitoring and Reporting).

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history of the potentially affected species. NMFS fully considered all of this information, and we refer the reader to these descriptions, instead of reprinting the information. Additional information about these species (e.g., physical and behavioral descriptions) may be found on NMFS' website (<https://www.fisheries.noaa.gov/find-species>). NMFS refers the reader to the aforementioned source for general information regarding the species listed in table 1.

The populations of marine mammals found in the survey area do not occur within the U.S. EEZ and therefore, are not assessed in NMFS' Stock Assessment Reports (SARs). For most species, there are no stocks defined for management purposes in the survey area, and NMFS is evaluating impacts at

the species level and ranges for most species evaluated here are considered to be the North Pacific. As such, information on potential biological removal level (PBR; defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population) and annual levels of serious injury and mortality from anthropogenic sources

are not available for these marine mammal populations. Abundance estimates for marine mammals in the survey location were calculated using density data for marine mammals from a US Navy Technical Report for the region (DoN, 2018). The area covered in this report include the Mariana Islands Training and Testing (MITT) Study Area, within approximately 6–23° N, 122–150° E, and the Transit Corridor which spans from the MITT Study Area to the International Date Line. These

abundance estimates are considered the best scientific information available on the abundance of marine mammal populations in the area.

Table 1 lists all species or stocks for which take is expected and proposed to be authorized for this activity and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA).

TABLE 1—SPECIES LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES

Common name	Scientific name	Stock/distinct population segment (DPS)	ESA/MMPA status; strategic (Y/N) ¹	Abundance ²
Order Artiodactyla—Cetacea—Mysticeti (baleen whales)				
<i>Family Balaenopteridae (rorquals)</i>				
Blue Whale	<i>Balaenoptera musculus</i>	NA	E, D, Y	150
Bryde's Whale	<i>Balaenoptera edeni</i>	NA	-, -, N	1,596
Fin Whale	<i>Balaenoptera physalus</i>	NA	E, D, Y	46
Humpback Whale	<i>Megaptera novaeangliae</i>	Western North Pacific DPS	E, D, Y	2,673
Humpback Whale	<i>Megaptera novaeangliae</i>	Oceania DPS	-, -, N	2,673
Minke Whale	<i>Balaenoptera acutorostrata</i>	NA	-, -, N	450
Sei Whale	<i>Balaenoptera borealis</i>	NA	E, D, Y	821
Omura's Whale	<i>Balaenoptera omurai</i>	NA	-, -, N	160
Odontoceti (toothed whales, dolphins, and porpoises)				
<i>Family Physeteridae</i>				
Sperm Whale	<i>Physeter macrocephalus</i>	NA	E, D, Y	5,146
<i>Family Kogiidae</i>				
Dwarf Sperm Whale	<i>Kogia sima</i>	NA	-, -, N	27,395
Pygmy Sperm Whale	<i>Kogia breviceps</i>	NA	-, -, N	11,168
<i>Family Ziphiidae (beaked whales)</i>				
Blainville's Beaked Whale	<i>Mesoplodon densirostris</i>	NA	-, -, N	3,376
Cuvier's Beaked Whale	<i>Ziphius cavirostris</i>	NA	-, -, N	2,642
Longman's Beaked Whale	<i>Indopacetus pacificus</i>	NA	-, -, N	11,253
Ginkgo-Toothed Beaked Whale	<i>Mesoplodon ginkgodens</i>	NA	-, -, N	7,567
Deraniyagala's Beaked Whale	<i>Mesoplodon hotaula</i>	NA	-, -, N	NA
<i>Family Delphinidae</i>				
False Killer Whale	<i>Pseudorca crassidens</i>	NA	-, -, N	4,218
Killer Whale	<i>Orcinus orca</i>	NA	-, -, N	253
Melon-Headed Whale	<i>Peponocephala electra</i>	NA	-, -, N	16,551
Pygmy Killer Whale	<i>Feresa attenuata</i>	NA	-, -, N	527
Short-Finned Pilot Whale	<i>Globicephala macrorhynchus</i>	NA	-, -, N	6,583
Bottlenose Dolphin	<i>Tursiops truncatus</i>	NA	-, -, N	1,076
Fraser's Dolphin	<i>Lagenodelphis hosei</i>	NA	-, -, N	76,476
Pantropical Spotted Dolphin	<i>Stenella attenuata</i>	NA	-, -, N	85,755
Risso's Dolphin	<i>Grampus griseus</i>	NA	-, -, N	17,184
Rough-Toothed Dolphin	<i>Steno bredanensis</i>	NA	-, -, N	1,815
Spinner Dolphin	<i>Stenella longirostris</i>	NA	-, -, N	5,232
Striped Dolphin	<i>Stenella coeruleoalba</i>	NA	-, -, N	24,528

¹ Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

² Abundance estimates for marine mammals in the survey location were calculated using density data for marine mammals from the U.S. Navy Marine Species Density Database Phase III for the Mariana Islands Training and Testing Study Area report (DoN 2018).

As indicated above, all 27 species in table 1 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur. All species that could potentially occur in the proposed survey areas are included

in table 3 of the IHA application. While common dolphins have been reported in the area, the temporal and/or spatial occurrence of these species is such that take is not expected to occur, and they are not discussed further beyond the

explanation provided here. The proposed study area is not a part of the common dolphin range. Studies have noted that common dolphins are rare in the Mariana Islands, and this species was not included in the U.S. Navy's

Marine Species Density Database for the Mariana Islands Training and Testing Study area. Katsumata and Matsuoka (2021, 2022) recorded sightings of common dolphins north of 35° N, approximately 1,665 km north of the study area.

In addition to what is included in sections 3 and 4 of the IHA application, and NMFS' website, further detail informing the regional occurrence for select species of particular or unique vulnerability (*i.e.*, information regarding ESA listed species) is provided below.

Blue Whale

The blue whale has a cosmopolitan distribution and tends to be pelagic, only coming nearshore to feed and possibly to breed (Jefferson *et al.*, 2015). The distribution of the species, at least during times of the year when feeding is a major activity, occurs in areas that provide large seasonal concentrations of euphausiids (Yochem and Leatherwood, 1985). Blue whales are most often found in cool, productive waters where upwelling occurs (Reilly and Thayer, 1990). Generally, blue whales are seasonal migrants between high latitudes in summer, where they feed, and low latitudes in winter, where they mate and give birth (Lockyer and Brown, 1981). The current distribution of blue whales in the western North Pacific is largely unknown; however, central North Pacific blue whales are known to migrate to the western and central Pacific to breed during winters. Blue whales are listed as endangered under the ESA.

Blue whales are rare in Micronesia; during a 2007 Mariana Islands survey that took place from January to April, no blue whales were detected visually or acoustically (DoN, 2007; Fulling *et al.*, 2011). However, blue whales were detected acoustically on recorders deployed in the Northern Mariana Islands from 2010 to 2013 (Oleson *et al.*, 2015) and there are confirmed records of blue whales near the Republic of the Marshall Islands and Wake Island (Wiles, 2005; SPREP, 2022; Miller, 2023).

Fin Whale

The fin whale is widely distributed in all the world's oceans (Gambell, 1985), although it is most abundant in temperate and cold waters (Aguilar and García-Vernet, 2018). Nonetheless, its overall range and distribution is not well known (Jefferson *et al.*, 2015). Fin whales most commonly occur offshore, but can also be found in coastal areas (Jefferson *et al.*, 2015). Most populations migrate seasonally between temperate waters where mating and calving occur

in winter, and polar waters where feeding occurs in the summer; they are known to use the shelf edge as a migration route (Evans, 1987).

In the North Pacific, fin whales are found in summer from the Chukchi Sea to California and in winter from California southwards in the eastern Pacific (Gambell, 1985). The current distribution of fin whales in the western North Pacific is largely unknown, but they are known to winter in the Yellow, East China, and South China seas (Parsons *et al.*, 1995; Rudolph and Smeenk, 2002). Fin whale calls are recorded in the North Pacific year-round (*e.g.*, Moore *et al.*, 2006; Stafford *et al.*, 2007, 2009), including the western North Pacific (Edwards *et al.*, 2015). They were detected acoustically near Wake Island during January 2010 (Oleson and Hill, 2010). However, no fin whales were sighted or detected acoustically during the January to April 2007 surveys in the waters of the Mariana Islands (DoN, 2007; Fulling *et al.*, 2011) or during NOAA surveys of the Mariana Islands (Hill *et al.*, 2020c; Yano *et al.*, 2022). Fin whales have been detected acoustically on recorders deployed in the Northern Mariana Islands from 2010 to 2013 (Oleson *et al.*, 2015).

Humpback Whale

The humpback whale is found throughout all oceans of the world (Clapham, 2018). Although considered to be mainly a coastal species, humpback whales often traverse deep pelagic areas while migrating (Calambokidis *et al.*, 2001; Garrigue *et al.*, 2002, 2015; Zerbini *et al.*, 2011). Humpbacks migrate between summer feeding grounds in high latitudes and winter calving and breeding grounds in tropical waters (Clapham and Mead, 1999). Humpback whales were previously listed as endangered under the ESA at the species level. NMFS re-evaluated the status of the species in 2015, and on September 8, 2016, NMFS divided the species into 14 DPS, removed the current species-level listing, and listed 4 DPSs as endangered and 1 DPS as threatened (81 FR 62259, September 8, 2016). The remaining nine DPSs were not listed. If humpback whales are encountered during the proposed survey, they would most likely be from the Western North Pacific DPS, which is listed as endangered under the ESA. It is unlikely that whales from the Oceania DPS, which is not listed under the ESA, would be encountered during the proposed survey. The longitudinal distribution boundaries of humpback whales wintering in Oceania lie between ~160°

E (west of New Caledonia) and ~120° W (east of French Polynesia) and latitudinally between 0° and 30° S.

Humpback whales occur throughout most of the Pacific, but are rare in the equatorial region (Jefferson *et al.*, 2015). North Pacific humpback whales summer in feeding grounds along the Pacific Rim and in the Bering and Okhotsk seas (Pike and MacAskie, 1969; Rice 1978; Winn and Reichley, 1985; Calambokidis *et al.*, 2000, 2001, 2008; Bettridge *et al.*, 2015). The Western North Pacific DPS winters in the western Pacific, particularly around the Ogasawara and Ryukyu islands in southern Japan and the northern Philippines (Calambokidis *et al.*, 2008; Bettridge *et al.*, 2015) and typically feed in Russia during the summer (Calambokidis *et al.*, 2008; Ransome *et al.*, 2023). At least five sightings of humpback whales were made from 1978 to 1996 in the Mariana Islands; including one sighting of a mother-calf pair (Eldredge, 2003). There were no humpback sightings during the January–April 2007 surveys in the Mariana Islands (DoN, 2007; Norris *et al.*, 2012). However, humpbacks were detected acoustically in the Mariana Islands, including just west of the proposed survey area, during January–April 2007 (DoN, 2007; Norris *et al.*, 2012), during acoustic recorder deployments in 2010–2013 (Oleson *et al.*, 2015), and during glider surveys in the southern Mariana Trench region during September–November 2014 (Klink *et al.*, 2015). Forty-two sightings were made during NOAA's Pacific Islands Fisheries Science Center (PIFSC) surveys of the southern Mariana Islands between 2010 and 2019 (Hill *et al.*, 2020c) and in May 2021 (Yano *et al.*, 2022).

Sei Whale

Sei whales are found in all ocean basins (Horwood, 2018) but appear to prefer mid-latitude temperate waters (Jefferson *et al.*, 2015). Habitat suitability models indicate that sei whale distribution is related to cool water with high chlorophyll levels (Palka *et al.*, 2017; Chavez-Rosales *et al.*, 2019). They occur in deeper waters characteristic of the continental shelf edge region (Hain *et al.*, 1985) and in other regions of steep bathymetric relief such as seamounts and canyons (Kenney and Winn, 1987; Gregr and Trites, 2001).

In the North Pacific during summer, the sei whale can be found from the Bering Sea to the Gulf of Alaska and down to the Baja California Peninsula, as well as in the western Pacific from Japan to Korea. On summer feeding grounds, sei whales associate with

oceanic frontal systems (Horwood, 1987) such as the cold eastern currents in the North Pacific (Perry *et al.*, 1999). Its winter distribution is concentrated at ~20° N (Rice, 1998). Three sightings of sei whales were made within the proposed survey area during the NOAA PIFSC transit from Hawaii to Guam from January to February 2010 (PIFSC, 2010a; Hill, 2023a). During the January to April 2007 surveys of the Mariana Islands, the sei whale was one of the most frequently sighted baleen whales (DoN, 2007; Fulling *et al.*, 2011), including sightings just west of the proposed survey area. All sei whale sightings were south of Saipan in water depths greater than 1,000 m deep, with a number of sightings directly over the Mariana Trench; 32 acoustic detections were also recorded (Norris *et al.*, 2012). No sei whales were detected during surveys of the southern Mariana Islands from 2010 to 2019 (Hill *et al.*, 2020c).

Sperm Whale

The sperm whale is widely distributed, occurring from the edge of the polar pack ice to the Equator in both hemispheres, with the sexes occupying different distributions (Whitehead, 2018). Their distribution and relative abundance can vary in response to prey availability, most notably squid (Jaquet and Gendron, 2002). Females generally inhabit waters >1,000 m deep at latitudes <40° where sea surface temperatures are <15° C; adult males move to higher latitudes as they grow older and larger in size, returning to warm-water breeding grounds (Whitehead, 2018).

The sperm whale is the most common large toothed whale in the Pacific Islands region (Reeves *et al.*, 1999). There are historical whaling records throughout the region in the months of

April through September, including within the proposed survey area (Townsend, 1935). Two sightings were made within the proposed survey area during the NOAA PIFSC transit from Hawaii to Guam from January to February 2010 (PIFSC, 2010a; Hill, 2023a), and three sightings were made east of the proposed survey area during a transit by PIFSC from Guam to Hawaii in April–May 2010 (PIFSC, 2010b; Hill, 2023b). Additionally, sperm whales have been sighted just north of the proposed survey area during summer surveys in 2014 (Matsuoka *et al.*, 2015). The Bismarck Sea in Papua New Guinea appears to be an important breeding ground for sperm whales as mother/calf pairs and mature males have been seen in this area (Madsen *et al.*, 2002). During the 2007 surveys, there were multiple sightings of groups that included calves (DoN, 2007). Observations were made of several large bulls with fresh tooth marks (one male rammed the survey ship) in 2007, which suggests that these males were engaged in competition for mates (Fulling and Salinas Vega, 2009). Thus, there is evidence that this area is used for breeding and calving by sperm whales. The sperm whale was the most frequently sighted cetacean during the January–April 2007 survey in the waters of the Mariana Island, and acoustic detections were three times higher than visual detections (DoN, 2007; Fulling *et al.*, 2011; Norris *et al.*, 2012); sperm whales were detected in deep waters throughout most of Mariana Islands, as well as just west of the proposed survey area. Additionally, acoustic detections were made on recorders in the Northern Mariana Islands from 2010 to 2013 (Oleson *et al.*, 2015) and during glider surveys in the southern Mariana Trench from September to November 2014 (Klink *et al.*, 2015). Seven sightings of

sperm whales were made during surveys conducted in the southern Mariana Islands during 2010–2019, three encounters were made during the Mariana Archipelago Cetacean Survey (MACS) 2015, and two sightings were recorded during MACS 2018 (Hill *et al.*, 2020c). Sperm whales were also seen and detected acoustically during May–July 2021 surveys in the Mariana Islands (Yano *et al.*, 2022).

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Not all marine mammal species have equal hearing capabilities (*e.g.*, Richardson *et al.*, 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc.*). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in table 2.

TABLE 2—MARINE MAMMAL HEARING GROUPS (NMFS, 2018)

Hearing group	Generalized hearing range *
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz.
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
High-frequency (HF) cetaceans (true porpoises, <i>Kogia</i> , river dolphins, Cephalorhynchid, <i>Lagenorhynchus cruciger</i> & <i>L. australis</i>).	275 Hz to 160 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz.

* Represents the generalized hearing range for the entire group as a composite (*i.e.*, all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall *et al.*, 2007) and PW pinniped (approximation).

The pinniped functional hearing group was modified from Southall *et al.* (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency

range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al.*, 2006; Kastelein *et al.*, 2009; Reichmuth *et al.*, 2013).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information.

On May 3, 2024, NMFS published (89 FR 36762) and solicited public comment on its draft Updated Technical Guidance, which includes updated thresholds and weighting functions to inform auditory injury estimates, and is intended to replace the 2018 Technical Guidance referenced above, once finalized. The public comment period ended on June 17, 2024. Although the

Updated Technical Guidance is not yet final, NMFS considers the updated hearing group in this proposed IHA, along with the existing Technical Guidance (NMFS, 2018), because at the time of the final agency decision on this request NMFS anticipates the Updated Technical Guidance will become final agency action and represent the best available science. The updated hearing

groups are presented below (table 3). The references, analysis, and methodology used in the development of the hearing groups are described in NMFS' 2024 Technical Guidance, which may be accessed at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance>.

TABLE 3—MARINE MAMMAL HEARING GROUPS (NMFS, 2024)

Hearing Group [^]	Generalized Hearing Range [*]
UNDERWATER	
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 36 ⁺ kHz.
High-frequency (HF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
Very High-frequency (VHF) cetaceans (true porpoises, <i>Kogia</i> , river dolphins, Cephalorhynchid, <i>Lagenorhynchus cruciger</i> & <i>L. australis</i>).	200 Hz to 165 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	40 Hz to 90 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 68 kHz.

[^]Southall *et al.* 2019 indicates that as more data become available there may be separate hearing group designations for Very Low-Frequency cetaceans (blue, fin, right, and bowhead whales) and Mid-Frequency cetaceans (sperm, killer, and beaked whales). However, at this point, all baleen whales are part of the LF cetacean hearing group, and sperm, killer, and beaked whales are part of the HF cetacean hearing group. Additionally, recent data indicates that as more data become available for Monachinae seals, separate hearing group designations may be appropriate for the two phocid subfamilies (Ruscher *et al.* 2021; Sills *et al.* 2021).

^{*}Represents the generalized hearing range for the entire group as a composite (*i.e.*, all species within the group), where individual species' hearing ranges may not be as broad. Generalized hearing range chosen based on ~65 dB threshold from composite audiogram, previous analysis in NMFS 2018, and/or data from Southall *et al.* 2007; Southall *et al.* 2019. Additionally, animals are able to detect very loud sounds above and below that "generalized" hearing range.

⁺NMFS is aware that the National Marine Mammal Foundation successfully collected preliminary hearing data on two minke whales during their third field season (2023) in Norway. These data have implications for not only the generalized hearing range for low-frequency cetaceans but also on their weighting function. However, at this time, no official results have been published. Furthermore, a fourth field season (2024) is proposed, where more data will likely be collected. Thus, it is premature for us to propose any changes to our current Updated Technical Guidance. However, mysticete hearing data is identified as a special circumstance that could merit re-evaluating the acoustic criteria in this document. Therefore, we anticipate that once the data from both field seasons are published, it will likely necessitate updating this document (*i.e.*, likely after the data gathered in the summer 2024 field season and associated analysis are published).

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section provides a discussion of the ways in which components of the specified activity may impact marine mammals and their habitat. The Estimated Take of Marine Mammals section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The Negligible Impact Analysis and Determination section considers the content of this section, the Estimated Take of Marine Mammals section, and the Proposed Mitigation section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and whether those impacts are reasonably expected to, or reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

Description of Active Acoustic Sound Sources

This section contains a brief technical background on sound, the characteristics of certain sound types, and on metrics used in this proposal inasmuch as the information is relevant to the specified activity and to a

discussion of the potential effects of the specified activity on marine mammals found later in this document.

Sound travels in waves, the basic components of which are frequency, wavelength, velocity, and amplitude. Frequency is the number of pressure waves that pass by a reference point per unit of time and is measured in hertz (Hz) or cycles per second. Wavelength is the distance between two peaks or corresponding points of a sound wave (length of one cycle). Higher frequency sounds have shorter wavelengths than lower frequency sounds, and typically attenuate (decrease) more rapidly, except in certain cases in shallower water. Amplitude is the height of the sound pressure wave or the "loudness" of a sound and is typically described using the relative unit of the dB. A sound pressure level (SPL) in dB is described as the ratio between a measured pressure and a reference pressure (for underwater sound, this is 1 micropascal (μPa)) and is a logarithmic unit that accounts for large variations in amplitude; therefore, a relatively small change in dB corresponds to large changes in sound pressure. The source level (SL) represents the SPL referenced at a

distance of 1 m from the source (referenced to 1 μPa) while the received level is the SPL at the listener's position (referenced to 1 μPa).

Root mean square (RMS) is the quadratic mean sound pressure over the duration of an impulse. Root mean square is calculated by squaring all of the sound amplitudes, averaging the squares, and then taking the square root of the average (Urick, 1983). Root mean square accounts for both positive and negative values; squaring the pressures makes all values positive so that they may be accounted for in the summation of pressure levels (Hastings and Popper, 2005). This measurement is often used in the context of discussing behavioral effects, in part because behavioral effects, which often result from auditory cues, may be better expressed through averaged units than by peak pressures.

Sound exposure level (SEL; represented as dB re 1 $\mu\text{Pa}^2 - \text{s}$) represents the total energy contained within a pulse and considers both intensity and duration of exposure. Peak sound pressure (also referred to as zero-to-peak sound pressure or 0–p) is the maximum instantaneous sound pressure measurable in the water at a specified distance from the source and is

represented in the same units as the RMS sound pressure. Another common metric is peak-to-peak sound pressure (pk–pk), which is the algebraic difference between the peak positive and peak negative sound pressures. Peak-to-peak pressure is typically approximately 6 dB higher than peak pressure (Southall *et al.*, 2007).

When underwater objects vibrate or activity occurs, sound-pressure waves are created. These waves alternately compress and decompress the water as the sound wave travels. Underwater sound waves radiate in a manner similar to ripples on the surface of a pond and may be either directed in a beam or beams or may radiate in all directions (omnidirectional sources), as is the case for pulses produced by the airgun array considered here. The compressions and decompressions associated with sound waves are detected as changes in pressure by aquatic life and man-made sound receptors such as hydrophones.

Even in the absence of sound from the specified activity, the underwater environment is typically loud due to ambient sound. Ambient sound is defined as environmental background sound levels lacking a single source or point (Richardson *et al.*, 1995), and the sound level of a region is defined by the total acoustical energy being generated by known and unknown sources. These sources may include physical (*e.g.*, wind and waves, earthquakes, ice, atmospheric sound), biological (*e.g.*, sounds produced by marine mammals, fish, and invertebrates), and anthropogenic (*e.g.*, vessels, dredging, construction) sound. A number of sources contribute to ambient sound, including the following (Richardson *et al.*, 1995):

Wind and waves: The complex interactions between wind and water surface, including processes such as breaking waves and wave-induced bubble oscillations and cavitation, are a main source of naturally occurring ambient sound for frequencies between 200 Hz and 50 kHz (Mitson, 1995). In general, ambient sound levels tend to increase with increasing wind speed and wave height. Surf sound becomes important near shore, with measurements collected at a distance of 8.5 km from shore showing an increase of 10 dB in the 100 to 700 Hz band during heavy surf conditions;

Precipitation: Sound from rain and hail impacting the water surface can become an important component of total sound at frequencies above 500 Hz, and possibly down to 100 Hz during quiet times;

Biological: Marine mammals can contribute significantly to ambient

sound levels, as can some fish and snapping shrimp. The frequency band for biological contributions is from approximately 12 Hz to over 100 kHz; and

Anthropogenic: Sources of anthropogenic sound related to human activity include transportation (surface vessels), dredging and construction, oil and gas drilling and production, seismic surveys, sonar, explosions, and ocean acoustic studies. Vessel noise typically dominates the total ambient sound for frequencies between 20 and 300 Hz. In general, the frequencies of anthropogenic sounds are below 1 kHz and, if higher frequency sound levels are created, they attenuate rapidly. Sound from identifiable anthropogenic sources other than the activity of interest (*e.g.*, a passing vessel) is sometimes termed background sound, as opposed to ambient sound.

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise “ambient” or “background” sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and human activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor, and is frequency-dependent. As a result of this dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a given frequency and location can vary by 10–20 dB from day to day (Richardson *et al.*, 1995). The result is that, depending on the source type and its intensity, sound from a given activity may be a negligible addition to the local environment or could form a distinctive signal that may affect marine mammals. Details of source types are described in the following text.

Sounds are often considered to fall into one of two general types: Pulsed and non-pulsed. The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.*, NMFS, 2018; Ward, 1997 in Southall *et al.*, 2007). Please see Southall *et al.* (2007) for an in-depth discussion of these concepts.

Pulsed sound sources (*e.g.*, airguns, explosions, gunshots, sonic booms, impact pile driving) produce signals that are brief (typically considered to be less than one second), broadband, atonal transients (American National

Standards Institute (ANSI), 1986, 2005; Harris, 1998; National Institute for Occupational Health and Safety (NIOSH), 1998; International Organization for Standardization (ISO), 2003) and occur either as isolated events or repeated in some succession. Pulsed sounds are all characterized by a relatively rapid rise from ambient pressure to a maximal pressure value followed by a rapid decay period that may include a period of diminishing, oscillating maximal and minimal pressures, and generally have an increased capacity to induce physical injury as compared with sounds that lack these features.

Non-pulsed sounds can be tonal, narrowband, or broadband, brief or prolonged, and may be either continuous or non-continuous (ANSI, 1995; NIOSH, 1998). Some of these non-pulsed sounds can be transient signals of short duration but without the essential properties of pulses (*e.g.*, rapid rise time). Examples of non-pulsed sounds include those produced by vessels, aircraft, machinery operations such as drilling or dredging, vibratory pile driving, and active sonar systems (such as those used by the U.S. Navy). The duration of such sounds, as received at a distance, can be greatly extended in a highly reverberant environment.

Airgun arrays produce pulsed signals with energy in a frequency range from about 10–2,000 Hz, with most energy radiated at frequencies below 200 Hz. The amplitude of the acoustic wave emitted from the source is equal in all directions (*i.e.*, omnidirectional), but airgun arrays do possess some directionality due to different phase delays between guns in different directions. Airgun arrays are typically tuned to maximize functionality for data acquisition purposes, meaning that sound transmitted in horizontal directions and at higher frequencies is minimized to the extent possible.

Acoustic Effects

Here, we discuss the effects of active acoustic sources on marine mammals.

Potential Effects of Underwater Sound¹—Anthropogenic sounds cover a broad range of frequencies and sound levels and can have a range of highly variable impacts on marine life, from none or minor to potentially severe responses, depending on received levels, duration of exposure, behavioral context, and various other factors. The

¹ Please refer to the information given previously (“Description of Active Acoustic Sound Sources”) regarding sound, characteristics of sound types, and metrics used in this document.

potential effects of underwater sound from active acoustic sources can potentially result in one or more of the following: Temporary or permanent hearing impairment; non-auditory physical or physiological effects; behavioral disturbance; stress; and masking (Richardson *et al.*, 1995; Gordon *et al.*, 2004; Nowacek *et al.*, 2007; Southall *et al.*, 2007; Götz *et al.*, 2009). The degree of effect is intrinsically related to the signal characteristics, received level, distance from the source, and duration of the sound exposure. In general, sudden, high level sounds can cause hearing loss, as can longer exposures to lower level sounds. Temporary or permanent loss of hearing, if it occurs at all, will occur almost exclusively in cases where a noise is within an animal's hearing frequency range. We first describe specific manifestations of acoustic effects before providing discussion specific to the use of airgun arrays.

Richardson *et al.* (1995) described zones of increasing intensity of effect that might be expected to occur, in relation to distance from a source and assuming that the signal is within an animal's hearing range. First is the area within which the acoustic signal would be audible (potentially perceived) to the animal, but not strong enough to elicit any overt behavioral or physiological response. The next zone corresponds with the area where the signal is audible to the animal and of sufficient intensity to elicit behavioral or physiological response. Third is a zone within which, for signals of high intensity, the received level is sufficient to potentially cause discomfort or tissue damage to auditory or other systems. Overlaying these zones to a certain extent is the area within which masking (*i.e.*, when a sound interferes with or masks the ability of an animal to detect a signal of interest that is above the absolute hearing threshold) may occur; the masking zone may be highly variable in size.

We describe the more severe effects of certain non-auditory physical or physiological effects only briefly as we do not expect that use of airgun arrays are reasonably likely to result in such effects (see below for further discussion). Potential effects from impulsive sound sources can range in severity from effects such as behavioral disturbance or tactile perception to physical discomfort, slight injury of the internal organs and the auditory system, or mortality (Yelverton *et al.*, 1973). Non-auditory physiological effects or injuries that theoretically might occur in marine mammals exposed to high level underwater sound or as a secondary

effect of extreme behavioral reactions (*e.g.*, change in dive profile as a result of an avoidance reaction) caused by exposure to sound include neurological effects, bubble formation, resonance effects, and other types of organ or tissue damage (Cox *et al.*, 2006; Southall *et al.*, 2007; Zimmer and Tyack, 2007; Tal *et al.*, 2015). The survey activities considered here do not involve the use of devices such as explosives or mid-frequency tactical sonar that are associated with these types of effects.

Threshold Shift—Marine mammals exposed to high-intensity sound, or to lower-intensity sound for prolonged periods, can experience hearing threshold shift (TS), which is the loss of hearing sensitivity at certain frequency ranges (Finneran, 2015). Threshold shift can be permanent (PTS), in which case the loss of hearing sensitivity is not fully recoverable, or temporary (TTS), in which case the animal's hearing threshold would recover over time (Southall *et al.*, 2007). Repeated sound exposure that leads to TTS could cause PTS. In severe cases of PTS, there can be total or partial deafness, while in most cases the animal has an impaired ability to hear sounds in specific frequency ranges (Kryter, 1985).

When PTS occurs, there is physical damage to the sound receptors in the ear (*i.e.*, tissue damage), whereas TTS represents primarily tissue fatigue and is reversible (Southall *et al.*, 2007). In addition, other investigators have suggested that TTS is within the normal bounds of physiological variability and tolerance and does not represent physical injury (*e.g.*, Ward, 1997). Therefore, NMFS does not typically consider TTS to constitute auditory injury.

Relationships between TTS and PTS thresholds have not been studied in marine mammals. There is no PTS data for cetaceans, but such relationships are assumed to be similar to those in humans and other terrestrial mammals. PTS typically occurs at exposure levels at least several dBs above (a 40-dB threshold shift approximates PTS onset; *e.g.*, Kryter *et al.*, 1966; Miller, 1974) that inducing mild TTS (a 6-dB threshold shift approximates TTS onset; *e.g.*, Southall *et al.* 2007). Based on data from terrestrial mammals, a precautionary assumption is that the PTS thresholds for impulsive sounds (such as airgun pulses as received close to the source) are at least 6 dB higher than the TTS threshold on a peak-pressure basis and PTS cumulative sound exposure level thresholds are 15 to 20 dB higher than TTS cumulative sound exposure level thresholds (Southall *et al.*, 2007). Given the higher

level of sound or longer exposure duration necessary to cause PTS as compared with TTS, it is considerably less likely that PTS could occur.

TTS is the mildest form of hearing impairment that can occur during exposure to sound (Kryter, 1985). While experiencing TTS, the hearing threshold rises, and a sound must be at a higher level in order to be heard. In terrestrial and marine mammals, TTS can last from minutes or hours to days (in cases of strong TTS). In many cases, hearing sensitivity recovers rapidly after exposure to the sound ends. Few data on sound levels and durations necessary to elicit mild TTS have been obtained for marine mammals.

Marine mammal hearing plays a critical role in communication with conspecifics, and interpretation of environmental cues for purposes such as predator avoidance and prey capture. Depending on the degree (elevation of threshold in dB), duration (*i.e.*, recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious. For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that occurs during a time where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during time when communication is critical for successful mother/calf interactions could have more serious impacts.

Finneran *et al.* (2015) measured hearing thresholds in 3 captive bottlenose dolphins before and after exposure to 10 pulses produced by a seismic airgun in order to study TTS induced after exposure to multiple pulses. Exposures began at relatively low levels and gradually increased over a period of several months, with the highest exposures at peak SPLs from 196 to 210 dB and cumulative (unweighted) SELs from 193–195 dB. No substantial TTS was observed. In addition, behavioral reactions were observed that indicated that animals can learn behaviors that effectively mitigate noise exposures (although exposure patterns must be learned, which is less likely in wild animals than for the captive animals considered in this study). The authors note that the failure to induce more significant auditory effects was likely due to the intermittent nature of exposure, the relatively low peak pressure produced by the acoustic source, and the low-frequency energy in airgun pulses as compared with the frequency range of best sensitivity for

dolphins and other mid-frequency cetaceans.

Currently, TTS data only exist for four species of cetaceans (bottlenose dolphin, beluga whale (*Delphinapterus leucas*), harbor porpoise (*Phocoena phocoena*), and Yangtze finless porpoise (*Neophocaena asiaeorientalis*)) exposed to a limited number of sound sources (*i.e.*, mostly tones and octave-band noise) in laboratory settings (Finneran, 2015). In general, harbor porpoises have a lower TTS onset than other measured cetacean species (Finneran, 2015). Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species.

Critical questions remain regarding the rate of TTS growth and recovery after exposure to intermittent noise and the effects of single and multiple pulses. Data at present are also insufficient to construct generalized models for recovery and determine the time necessary to treat subsequent exposures as independent events. More information is needed on the relationship between auditory evoked potential and behavioral measures of TTS for various stimuli. For summaries of data on TTS in marine mammals or for further discussion of TTS onset thresholds, please see Southall *et al.* (2007, 2019), Finneran and Jenkins (2012), Finneran (2015), and NMFS (2018).

Behavioral Effects—Behavioral disturbance may include a variety of effects, including subtle changes in behavior (*e.g.*, minor or brief avoidance of an area or changes in vocalizations), more conspicuous changes in similar behavioral activities, and more sustained and/or potentially severe reactions, such as displacement from or abandonment of high-quality habitat. Behavioral responses to sound are highly variable and context-specific, and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.*, species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.*, Richardson *et al.*, 1995; Wartzok *et al.*, 2003; Southall *et al.*, 2007, 2019; Weilgart, 2007; Archer *et al.*, 2010). Behavioral reactions can vary not only among individuals but also within an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.*, 2012), and can vary depending on characteristics associated with the sound source (*e.g.*, whether it is moving or stationary, number of sources, distance from the source). Please see appendices B–C of Southall

et al. (2007) for a review of studies involving marine mammal behavioral responses to sound.

Habituation can occur when an animal's response to a stimulus wanes with repeated exposure, usually in the absence of unpleasant associated events (Wartzok *et al.*, 2003). Animals are most likely to habituate to sounds that are predictable and unvarying. It is important to note that habituation is appropriately considered as a “progressive reduction in response to stimuli that are perceived as neither aversive nor beneficial,” rather than as, more generally, moderation in response to human disturbance (Bejder *et al.*, 2009). The opposite process is sensitization, when an unpleasant experience leads to subsequent responses, often in the form of avoidance, at a lower level of exposure. As noted, behavioral state may affect the type of response. For example, animals that are resting may show greater behavioral change in response to disturbing sound levels than animals that are highly motivated to remain in an area for feeding (Richardson *et al.*, 1995; NRC, 2003; Wartzok *et al.*, 2003). Controlled experiments with captive marine mammals have shown pronounced behavioral reactions, including avoidance of loud sound sources (Ridgway *et al.*, 1997). Observed responses of wild marine mammals to loud pulsed sound sources (typically seismic airguns or acoustic harassment devices) have been varied but often consist of avoidance behavior or other behavioral changes suggesting discomfort (Morton and Symonds, 2002; see also Richardson *et al.*, 1995; Nowacek *et al.*, 2007). However, many delphinids approach acoustic source vessels with no apparent discomfort or obvious behavioral change (*e.g.*, Barkaszi *et al.*, 2012).

Available studies show wide variation in response to underwater sound; therefore, it is difficult to predict specifically how any given sound in a particular instance might affect marine mammals perceiving the signal. If a marine mammal does react briefly to an underwater sound by changing its behavior or moving a small distance, the impacts of the change are unlikely to be significant to the individual, let alone the stock or population. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on individuals and populations could be significant (*e.g.*, Lusseau and Bejder, 2007; Weilgart, 2007; NRC, 2005). There are broad categories of potential response, which we describe in greater detail here, that include

alteration of dive behavior, alteration of foraging behavior, effects to breathing, interference with or alteration of vocalization, avoidance, and flight.

Changes in dive behavior can vary widely, and may consist of increased or decreased dive times and surface intervals as well as changes in the rates of ascent and descent during a dive (*e.g.*, Frankel and Clark, 2000; Ng and Leung, 2003; Nowacek *et al.*, 2004; Goldbogen *et al.*, 2013a, b). Variations in dive behavior may reflect disruptions in biologically significant activities (*e.g.*, foraging) or they may be of little biological significance. The impact of an alteration to dive behavior resulting from an acoustic exposure depends on what the animal is doing at the time of the exposure and the type and magnitude of the response.

Disruption of feeding behavior can be difficult to correlate with anthropogenic sound exposure, so it is usually inferred by observed displacement from known foraging areas, the appearance of secondary indicators (*e.g.*, bubble nets or sediment plumes), or changes in dive behavior. As for other types of behavioral response, the frequency, duration, and temporal pattern of signal presentation, as well as differences in species sensitivity, are likely contributing factors to differences in response in any given circumstance (*e.g.*, Croll *et al.*, 2001; Nowacek *et al.*, 2004; Madsen *et al.*, 2006; Yazvenko *et al.*, 2007). A determination of whether foraging disruptions affect fitness consequences would require information on or estimates of the energetic requirements of the affected individuals and the relationship between prey availability, foraging effort and success, and the life history stage of the animal.

Visual tracking, passive acoustic monitoring (PAM), and movement recording tags were used to quantify sperm whale behavior prior to, during, and following exposure to airgun arrays at received levels in the range 140–160 dB at distances of 7–13 km, following a phase-in of sound intensity and full array exposures at 1–13 km (Madsen *et al.*, 2006; Miller *et al.*, 2009). Sperm whales did not exhibit horizontal avoidance behavior at the surface. However, foraging behavior may have been affected. The sperm whales exhibited 19 percent less vocal, or buzz, rate during full exposure relative to post exposure, and the whale that was approached most closely had an extended resting period and did not resume foraging until the airguns had ceased firing. The remaining whales continued to execute foraging dives throughout exposure; however,

swimming movements during foraging dives were 6 percent lower during exposure than control periods (Miller *et al.*, 2009). These data raise concerns that seismic surveys may impact foraging behavior in sperm whales, although more data are required to understand whether the differences were due to exposure or natural variation in sperm whale behavior (Miller *et al.*, 2009).

Changes in respiration naturally vary with different behaviors and alterations to breathing rate as a function of acoustic exposure can be expected to co-occur with other behavioral reactions, such as a flight response or an alteration in diving. However, respiration rates in and of themselves may be representative of annoyance or an acute stress response. Various studies have shown that respiration rates may either be unaffected or could increase, depending on the species and signal characteristics, again highlighting the importance in understanding species differences in the tolerance of underwater noise when determining the potential for impacts resulting from anthropogenic sound exposure (e.g., Kastelein *et al.*, 2001, 2005, 2006; Gailey *et al.*, 2007, 2016).

Marine mammals vocalize for different purposes and across multiple modes, such as whistling, echolocation click production, calling, and singing. Changes in vocalization behavior in response to anthropogenic noise can occur for any of these modes and may result from a need to compete with an increase in background noise or may reflect increased vigilance or a startle response. For example, in the presence of potentially masking signals, humpback whales and killer whales have been observed to increase the length of their songs or amplitude of calls (Miller *et al.*, 2000; Fristrup *et al.*, 2003; Foote *et al.*, 2004; Holt *et al.*, 2012), while right whales have been observed to shift the frequency content of their calls upward while reducing the rate of calling in areas of increased anthropogenic noise (Parks *et al.*, 2007). In some cases, animals may cease sound production during production of aversive signals (Bowles *et al.*, 1994).

Cerchio *et al.* (2014) used PAM to document the presence of singing humpback whales off the coast of northern Angola and to opportunistically test for the effect of seismic survey activity on the number of singing whales. Two recording units were deployed between March and December 2008 in the offshore environment; numbers of singers were counted every hour. Generalized Additive Mixed Models were used to assess the effect of survey day (seasonality), hour (diel variation),

moon phase, and received levels of noise (measured from a single pulse during each 10 minutes sampled period) on singer number. The number of singers significantly decreased with increasing received level of noise, suggesting that humpback whale communication was disrupted to some extent by the survey activity.

Castellote *et al.* (2012) reported acoustic and behavioral changes by fin whales in response to shipping and airgun noise. Acoustic features of fin whale song notes recorded in the Mediterranean Sea and northeast Atlantic Ocean were compared for areas with different shipping noise levels and traffic intensities and during a seismic airgun survey. During the first 72 hours of the survey, a steady decrease in song received levels and bearings to singers indicated that whales moved away from the acoustic source and out of the study area. This displacement persisted for a time period well beyond the 10-day duration of seismic airgun activity, providing evidence that fin whales may avoid an area for an extended period in the presence of increased noise. The authors hypothesize that fin whale acoustic communication is modified to compensate for increased background noise and that a sensitization process may play a role in the observed temporary displacement.

Seismic pulses at average received levels of 131 dB re 1 $\mu\text{Pa}^2\text{-s}$ caused blue whales to increase call production (Di Iorio and Clark, 2010). In contrast, McDonald *et al.* (1995) tracked a blue whale with seafloor seismometers and reported that it stopped vocalizing and changed its travel direction at a range of 10 km from the acoustic source vessel (estimated received level 143 dB pk-pk). Blackwell *et al.* (2013) found that bowhead whale call rates dropped significantly at onset of airgun use at sites with a median distance of 41–45 km from the survey. Blackwell *et al.* (2015) expanded this analysis to show that whales actually increased calling rates as soon as airgun signals were detectable before ultimately decreasing calling rates at higher received levels (i.e., 10-minute cumulative sound exposure level (SEL_{cum}) of ~127 dB). Overall, these results suggest that bowhead whales may adjust their vocal output in an effort to compensate for noise before ceasing vocalization effort and ultimately deflecting from the acoustic source (Blackwell *et al.*, 2013, 2015). These studies demonstrate that even low levels of noise received far from the source can induce changes in vocalization and/or behavior for mysticetes.

Avoidance is the displacement of an individual from an area or migration path as a result of the presence of sound or other stressors, and is one of the most obvious manifestations of disturbance in marine mammals (Richardson *et al.*, 1995). For example, gray whales are known to change direction—deflecting from customary migratory paths—in order to avoid noise from seismic surveys (Malme *et al.*, 1984). Humpback whales show avoidance behavior in the presence of an active seismic array during observational studies and controlled exposure experiments in western Australia (McCauley *et al.*, 2000). Avoidance may be short-term, with animals returning to the area once the noise has ceased (e.g., Bowles *et al.*, 1994; Goold, 1996; Stone *et al.*, 2000; Morton and Symonds, 2002; Gailey *et al.*, 2007). Longer-term displacement is possible, however, which may lead to changes in abundance or distribution patterns of the affected species in the affected region if habituation to the presence of the sound does not occur (e.g., Bejder *et al.*, 2006; Teilmann *et al.*, 2006).

Forney *et al.* (2017) detail the potential effects of noise on marine mammal populations with high site fidelity, including displacement and auditory masking, noting that a lack of observed response does not imply absence of fitness costs and that apparent tolerance of disturbance may have population-level impacts that are less obvious and difficult to document. Avoidance of overlap between disturbing noise and areas and/or times of particular importance for sensitive species may be critical to avoiding population-level impacts because (particularly for animals with high site fidelity) there may be a strong motivation to remain in the area despite negative impacts. Forney *et al.* (2017) state that, for these animals, remaining in a disturbed area may reflect a lack of alternatives rather than a lack of effects.

Forney *et al.* (2017) specifically discuss beaked whales, stating that until recently most knowledge of beaked whales was derived from strandings, as they have been involved in atypical mass stranding events associated with mid-frequency active sonar (MFAS) training operations. Given these observations and recent research, beaked whales appear to be particularly sensitive and vulnerable to certain types of acoustic disturbance relative to most other marine mammal species. Individual beaked whales reacted strongly to experiments using simulated MFAS at low received levels, by moving away from the sound source and stopping foraging for extended periods.

These responses, if on a frequent basis, could result in significant fitness costs to individuals (Forney *et al.*, 2017). Additionally, difficulty in detection of beaked whales due to their cryptic surfacing behavior and silence when near the surface pose problems for mitigation measures employed to protect beaked whales. Forney *et al.* (2017) specifically states that failure to consider both displacement of beaked whales from their habitat and noise exposure could lead to more severe biological consequences.

A flight response is a dramatic change in normal movement to a directed and rapid movement away from the perceived location of a sound source. The flight response differs from other avoidance responses in the intensity of the response (e.g., directed movement, rate of travel). Relatively little information on flight responses of marine mammals to anthropogenic signals exist, although observations of flight responses to the presence of predators have occurred (Connor and Heithaus, 1996). The result of a flight response could range from brief, temporary exertion and displacement from the area where the signal provokes flight to, in extreme cases, marine mammal strandings (Evans and England, 2001). However, it should be noted that response to a perceived predator does not necessarily invoke flight (Ford and Reeves, 2008), and whether individuals are solitary or in groups may influence the response.

Behavioral disturbance can also impact marine mammals in more subtle ways. Increased vigilance may result in costs related to diversion of focus and attention (*i.e.*, when a response consists of increased vigilance, it may come at the cost of decreased attention to other critical behaviors such as foraging or resting). These effects have generally not been demonstrated for marine mammals, but studies involving fish and terrestrial animals have shown that increased vigilance may substantially reduce feeding rates (e.g., Beauchamp and Livoreil, 1997; Fritz *et al.*, 2002; Purser and Radford, 2011). In addition, chronic disturbance can cause population declines through reduction of fitness (e.g., decline in body condition) and subsequent reduction in reproductive success, survival, or both (e.g., Harrington and Veitch, 1992; Daan *et al.*, 1996; Bradshaw *et al.*, 1998). However, Ridgway *et al.* (2006) reported that increased vigilance in bottlenose dolphins exposed to sound over a 5-day period did not cause any sleep deprivation or stress effects.

Many animals perform vital functions, such as feeding, resting, traveling, and

socializing, on a diel cycle (24-hour cycle). Disruption of such functions resulting from reactions to stressors, such as sound exposure, are more likely to be significant if they last more than one diel cycle or recur on subsequent days (Southall *et al.*, 2007). Consequently, a behavioral response lasting less than 1 day and not recurring on subsequent days is not considered particularly severe unless it could directly affect reproduction or survival (Southall *et al.*, 2007). Note that there is a difference between multi-day substantive behavioral reactions and multi-day anthropogenic activities. For example, just because an activity lasts for multiple days does not necessarily mean that individual animals are either exposed to activity-related stressors for multiple days or, further, exposed in a manner resulting in sustained multi-day substantive behavioral responses.

Stone (2015) reported data from at-sea observations during 1,196 seismic surveys from 1994 to 2010. When arrays of large airguns (considered to be 500 in³ or more in that study) were firing, lateral displacement, more localized avoidance, or other changes in behavior were evident for most odontocetes. However, significant responses to large arrays were found only for the minke whale and fin whale. Behavioral responses observed included changes in swimming or surfacing behavior, with indications that cetaceans remained near the water surface at these times. Cetaceans were recorded as feeding less often when large arrays were active. Behavioral observations of gray whales during a seismic survey monitored whale movements and respirations pre-, during, and post-seismic survey (Gailey *et al.*, 2016). Behavioral state and water depth were the best “natural” predictors of whale movements and respiration and, after considering natural variation, none of the response variables were significantly associated with seismic survey or vessel sounds.

Stress Responses—An animal’s perception of a threat may be sufficient to trigger stress responses consisting of some combination of behavioral responses, autonomic nervous system responses, neuroendocrine responses, or immune responses (e.g., Seyle, 1950; Moberg, 2000). In many cases, an animal’s first and sometimes most economical (in terms of energetic costs) response is behavioral avoidance of the potential stressor. Autonomic nervous system responses to stress typically involve changes in heart rate, blood pressure, and gastrointestinal activity. These responses have a relatively short duration and may or may not have a

significant long-term effect on an animal’s fitness.

Neuroendocrine stress responses often involve the hypothalamus-pituitary-adrenal system. Virtually all neuroendocrine functions that are affected by stress—including immune competence, reproduction, metabolism, and behavior—are regulated by pituitary hormones. Stress-induced changes in the secretion of pituitary hormones have been implicated in failed reproduction, altered metabolism, reduced immune competence, and behavioral disturbance (e.g., Moberg, 1987; Blecha, 2000). Increases in the circulation of glucocorticoids are also equated with stress (Romano *et al.*, 2004).

The primary distinction between stress (which is adaptive and does not normally place an animal at risk) and distress is the cost of the response. During a stress response, an animal uses glycogen stores that can be quickly replenished once the stress is alleviated. In such circumstances, the cost of the stress response would not pose serious fitness consequences. However, when an animal does not have sufficient energy reserves to satisfy the energetic costs of a stress response, energy resources must be diverted from other functions. This state of distress will last until the animal replenishes its energetic reserves sufficiently to restore normal function.

Relationships between these physiological mechanisms, animal behavior, and the costs of stress responses are well-studied through controlled experiments and for both laboratory and free-ranging animals (e.g., Holberton *et al.*, 1996; Hood *et al.*, 1998; Jessop *et al.*, 2003; Krausman *et al.*, 2004; Lankford *et al.*, 2005). Stress responses due to exposure to anthropogenic sounds or other stressors and their effects on marine mammals have also been reviewed (Fair and Becker, 2000; Romano *et al.*, 2002b) and, more rarely, studied in wild populations (e.g., Romano *et al.*, 2002a). For example, Rolland *et al.* (2012) found that noise reduction from reduced ship traffic in the Bay of Fundy was associated with decreased stress in North Atlantic right whales. These and other studies lead to a reasonable expectation that some marine mammals will experience physiological stress responses upon exposure to acoustic stressors and that it is possible that some of these would be classified as “distress.” In addition, any animal experiencing TTS would likely also experience stress responses (NRC, 2003).

Auditory Masking—Sound can disrupt behavior through masking, or

interfering with, an animal's ability to detect, recognize, or discriminate between acoustic signals of interest (e.g., those used for intraspecific communication and social interactions, prey detection, predator avoidance, navigation) (Richardson *et al.*, 1995; Erbe *et al.*, 2016). Masking occurs when the receipt of a sound is interfered with by another coincident sound at similar frequencies and at similar or higher intensity, and may occur whether the sound is natural (e.g., snapping shrimp, wind, waves, precipitation) or anthropogenic (e.g., shipping, sonar, seismic exploration) in origin. The ability of a noise source to mask biologically important sounds depends on the characteristics of both the noise source and the signal of interest (e.g., signal-to-noise ratio, temporal variability, direction), in relation to each other and to an animal's hearing abilities (e.g., sensitivity, frequency range, critical ratios, frequency discrimination, directional discrimination, age or TTS hearing loss), and existing ambient noise and propagation conditions.

Under certain circumstances, significant masking could disrupt behavioral patterns, which in turn could affect fitness for survival and reproduction. It is important to distinguish TTS and PTS, which persist after the sound exposure, from masking, which occurs during the sound exposure. Because masking (without resulting in TS) is not associated with abnormal physiological function, it is not considered a physiological effect, but rather a potential behavioral effect.

The frequency range of the potentially masking sound is important in predicting any potential behavioral impacts. For example, low-frequency signals may have less effect on high-frequency echolocation sounds produced by odontocetes but are more likely to affect detection of mysticete communication calls and other potentially important natural sounds such as those produced by surf and some prey species. The masking of communication signals by anthropogenic noise may be considered as a reduction in the communication space of animals (e.g., Clark *et al.*, 2009) and may result in energetic or other costs as animals change their vocalization behavior (e.g., Miller *et al.*, 2000; Foote *et al.*, 2004; Parks *et al.*, 2007; Di Iorio and Clark, 2009; Holt *et al.*, 2009). Masking may be less in situations where the signal and noise come from different directions (Richardson *et al.*, 1995), through amplitude modulation of the signal, or through other compensatory behaviors

(Houser and Moore, 2014). Masking can be tested directly in captive species (e.g., Erbe, 2008), but in wild populations it must be either modeled or inferred from evidence of masking compensation. There are few studies addressing real-world masking sounds likely to be experienced by marine mammals in the wild (e.g., Branstetter *et al.*, 2013).

Masking affects both senders and receivers of acoustic signals and can potentially have long-term chronic effects on marine mammals at the population level as well as at the individual level. Low-frequency ambient sound levels have increased by as much as 20 dB (more than three times in terms of SPL) in the world's ocean from pre-industrial periods, with most of the increase from distant commercial shipping (Hildebrand, 2009). All anthropogenic sound sources, but especially chronic and lower-frequency signals (e.g., from vessel traffic), contribute to elevated ambient sound levels, thus intensifying masking.

Masking effects of pulsed sounds (even from large arrays of airguns) on marine mammal calls and other natural sounds are expected to be limited, although there are few specific data on this. Because of the intermittent nature and low duty cycle of seismic pulses, animals can emit and receive sounds in the relatively quiet intervals between pulses. However, in exceptional situations, reverberation occurs for much or all of the interval between pulses (e.g., Simard *et al.* 2005; Clark and Gagnon 2006), which could mask calls. Situations with prolonged strong reverberation are infrequent. However, it is common for reverberation to cause some lesser degree of elevation of the background level between airgun pulses (e.g., Gedamke 2011; Guerra *et al.* 2011, 2016; Klinck *et al.* 2012; Guan *et al.* 2015), and this weaker reverberation presumably reduces the detection range of calls and other natural sounds to some degree. Guerra *et al.* (2016) reported that ambient noise levels between seismic pulses were elevated as a result of reverberation at ranges of 50 km from the seismic source. Based on measurements in deep water of the Southern Ocean, Gedamke (2011) estimated that the slight elevation of background noise levels during intervals between seismic pulses reduced blue and fin whale communication space by as much as 36–51 percent when a seismic survey was operating 450–2,800 km away. Based on preliminary modeling, Wittekind *et al.* (2016) reported that airgun sounds could reduce the communication range of blue and fin whales 2,000 km from the

seismic source. Nieu Kirk *et al.* (2012) and Blackwell *et al.* (2013) noted the potential for masking effects from seismic surveys on large whales.

Some baleen and toothed whales are known to continue calling in the presence of seismic pulses, and their calls usually can be heard between the pulses (e.g., Nieu Kirk *et al.* 2012; Thode *et al.* 2012; Bröker *et al.* 2013; Sciacca *et al.* 2016). Cerchio *et al.* (2014) suggested that the breeding display of humpback whales off Angola could be disrupted by seismic sounds, as singing activity declined with increasing received levels. In addition, some cetaceans are known to change their calling rates, shift their peak frequencies, or otherwise modify their vocal behavior in response to airgun sounds (e.g., Di Iorio and Clark 2010; Castellote *et al.* 2012; Blackwell *et al.* 2013, 2015). The hearing systems of baleen whales are more sensitive to low-frequency sounds than are the ears of the small odontocetes that have been studied directly (e.g., MacGillivray *et al.*, 2014). The sounds important to small odontocetes are predominantly at much higher frequencies than are the dominant components of airgun sounds, thus limiting the potential for masking. In general, masking effects of seismic pulses are expected to be minor, given the normally intermittent nature of seismic pulses.

Vessel Noise

Vessel noise from the *Sikuliaq* could affect marine animals in the proposed survey areas. Houghton *et al.* (2015) proposed that vessel speed is the most important predictor of received noise levels, and Putland *et al.* (2017) also reported reduced sound levels with decreased vessel speed. However, some energy is also produced at higher frequencies (Hermannsen *et al.*, 2014); low levels of high-frequency sound from vessels has been shown to elicit responses in harbor porpoise (Dyndo *et al.*, 2015).

Vessel noise, through masking, can reduce the effective communication distance of a marine mammal if the frequency of the sound source is close to that used by the animal, and if the sound is present for a significant fraction of time (e.g., Richardson *et al.* 1995; Clark *et al.*, 2009; Jensen *et al.*, 2009; Gervaise *et al.*, 2012; Hatch *et al.*, 2012; Rice *et al.*, 2014; Dunlop 2015; Erbe *et al.*, 2015; Jones *et al.*, 2017; Putland *et al.*, 2017). In addition to the frequency and duration of the masking sound, the strength, temporal pattern, and location of the introduced sound also play a role in the extent of the masking (Branstetter *et al.*, 2013, 2016;

Finneran and Branstetter 2013; Sills *et al.*, 2017). Branstetter *et al.* (2013) reported that time-domain metrics are also important in describing and predicting masking.

Baleen whales are thought to be more sensitive to sound at these low frequencies than are toothed whales (e.g., MacGillivray *et al.* 2014), possibly causing localized avoidance of the proposed survey area during seismic operations. Many odontocetes show considerable tolerance of vessel traffic, although they sometimes react at long distances if confined by ice or shallow water, if previously harassed by vessels, or have had little or no recent exposure to vessels (Richardson *et al.* 1995). Pirotta *et al.* (2015) noted that the physical presence of vessels, not just ship noise, disturbed the foraging activity of bottlenose dolphins. There is little data on the behavioral reactions of beaked whales to vessel noise, though they seem to avoid approaching vessels (e.g., Würsig *et al.*, 1998) or dive for an extended period when approached by a vessel (e.g., Kasuya, 1986).

In summary, project vessel sounds would not be at levels expected to cause anything more than possible localized and temporary behavioral changes in marine mammals, and would not be expected to result in significant negative effects on individuals or at the population level. In addition, in all oceans of the world, large vessel traffic is currently so prevalent that it is commonly considered a usual source of ambient sound (NSF-USGS, 2011).

Vessel Strike

Vessel collisions with marine mammals, or vessel strikes, can result in death or serious injury of the animal. Wounds resulting from vessel strike may include massive trauma, hemorrhaging, broken bones, or propeller lacerations (Knowlton and Kraus, 2001). An animal at the surface may be struck directly by a vessel, a surfacing animal may hit the bottom of a vessel, or an animal just below the surface may be cut by a vessel's propeller. Superficial strikes may not kill or result in the death of the animal. These interactions are typically associated with large whales (e.g., fin whales), which are occasionally found draped across the bulbous bow of large commercial vessels upon arrival in port. Although smaller cetaceans are more maneuverable in relation to large vessels than are large whales, they may also be susceptible to strike. The severity of injuries typically depends on the size and speed of the vessel, with the probability of death or serious injury increasing as vessel speed increases

(Knowlton and Kraus, 2001; Laist *et al.*, 2001; Vanderlaan and Taggart, 2007; Conn and Silber, 2013). Impact forces increase with speed, as does the probability of a strike at a given distance (Silber *et al.*, 2010; Gende *et al.*, 2011).

Pace and Silber (2005) also found that the probability of death or serious injury increased rapidly with increasing vessel speed. Specifically, the predicted probability of serious injury or death increased from 45 to 75 percent as vessel speed increased from 10 to 14 knots (kn (26 kilometer per hour (kph))), and exceeded 90 percent at 17 kn (31 kph). Higher speeds during collisions result in greater force of impact, but higher speeds also appear to increase the chance of severe injuries or death through increased likelihood of collision by pulling whales toward the vessel (Clyne, 1999; Knowlton *et al.*, 1995). In a separate study, Vanderlaan and Taggart (2007) analyzed the probability of lethal mortality of large whales at a given speed, showing that the greatest rate of change in the probability of a lethal injury to a large whale as a function of vessel speed occurs between 8.6 and 15 kn (28 kph). The chances of a lethal injury decline from approximately 80 percent at 15 kn (28 kph) to approximately 20 percent at 8.6 kn (16 kph). At speeds below 11.8 kn (22 kph), the chances of lethal injury drop below 50 percent, while the probability asymptotically increases toward one hundred percent above 15 kn (28 kph).

The *Sikuliaq* will travel at a speed of 5 kn (9 kph) while towing seismic survey gear. At this speed, both the possibility of striking a marine mammal and the possibility of a strike resulting in serious injury or mortality are discountable. At average transit speed, the probability of serious injury or mortality resulting from a strike is less than 50 percent. However, the likelihood of a strike actually happening is again discountable. Vessel strikes, as analyzed in the studies cited above, generally involve commercial shipping, which is much more common in both space and time than is geophysical survey activity. Jensen and Silber (2004) summarized vessel strikes of large whales worldwide from 1975–2003 and found that most collisions occurred in the open ocean and involved large vessels (e.g., commercial shipping). No such incidents were reported for geophysical survey vessels during that time period.

It is possible for vessel strikes to occur while traveling at slow speeds. For example, a hydrographic survey vessel traveling at low speed (5.5 kn (10 kph)) while conducting mapping surveys off

the central California coast struck and killed a blue whale in 2009. The State of California determined that the whale had suddenly and unexpectedly surfaced beneath the hull, with the result that the propeller severed the whale's vertebrae, and that this was an unavoidable event. This strike represents the only such incident in approximately 540,000 hours of similar coastal mapping activity ($p = 1.9 \times 10^{-6}$; 95 percent confidence interval = $0-5.5 \times 10^{-6}$; NMFS, 2013). In addition, a research vessel reported a fatal strike in 2011 of a dolphin in the Atlantic, demonstrating that it is possible for strikes involving smaller cetaceans to occur. In that case, the incident report indicated that an animal apparently was struck by the vessel's propeller as it was intentionally swimming near the vessel. While indicative of the type of unusual events that cannot be ruled out, neither of these instances represents a circumstance that would be considered reasonably foreseeable or that would be considered preventable.

Although the likelihood of the vessel striking a marine mammal is low, we propose a robust vessel strike avoidance protocol (see Proposed Mitigation), which we believe eliminates any foreseeable risk of vessel strike during transit. We anticipate that vessel collisions involving a seismic data acquisition vessel towing gear, while not impossible, represent unlikely, unpredictable events for which there are no preventive measures. Given the proposed mitigation measures, the relatively slow speed of the vessel towing gear, the presence of bridge crew watching for obstacles at all times (including marine mammals), and the presence of marine mammal observers, the possibility of vessel strike is discountable and, further, were a strike of a large whale to occur, it would be unlikely to result in serious injury or mortality. No incidental take resulting from vessel strike is anticipated, and this potential effect of the specified activity will not be discussed further in the following analysis.

Stranding—When a living or dead marine mammal swims or floats onto shore and becomes “beached” or incapable of returning to sea, the event is a “stranding” (Geraci *et al.*, 1999; Perrin and Geraci, 2002; Geraci and Lounsbury, 2005; NMFS, 2007). The legal definition for a stranding under the MMPA is that a marine mammal is dead and is on a beach or shore of the United States; or in waters under the jurisdiction of the United States (including any navigable waters); or a marine mammal is alive and is on a beach or shore of the United States and

is unable to return to the water; on a beach or shore of the United States and, although able to return to the water, is in need of apparent medical attention; or in the waters under the jurisdiction of the United States (including any navigable waters), but is unable to return to its natural habitat under its own power or without assistance.

Marine mammals strand for a variety of reasons, such as infectious agents, biotoxins, starvation, fishery interaction, vessel strike, unusual oceanographic or weather events, sound exposure, or combinations of these stressors sustained concurrently or in series. However, the cause or causes of most strandings are unknown (Geraci *et al.*, 1976; Eaton, 1979; Odell *et al.*, 1980; Best, 1982). Numerous studies suggest that the physiology, behavior, habitat relationships, age, or condition of cetaceans may cause them to strand or might predispose them to strand when exposed to another phenomenon. These suggestions are consistent with the conclusions of numerous other studies that have demonstrated that combinations of dissimilar stressors commonly combine to kill an animal or dramatically reduce its fitness, even though one exposure without the other does not produce the same result (Chroussos, 2000; Creel, 2005; DeVries *et al.*, 2003; Fair and Becker, 2000; Foley *et al.*, 2001; Moberg, 2000; Relyea, 2005a; 2005b; Romero, 2004; Sih *et al.*, 2004).

There is no conclusive evidence that exposure to airgun noise results in behaviorally-mediated forms of injury. Behaviorally-mediated injury (*i.e.*, mass stranding events) has been primarily associated with beaked whales exposed to mid-frequency active (MFA) naval sonar. MFA sonar and the alerting stimulus used in Nowacek *et al.* (2004) are very different from the noise produced by airguns. One should therefore not expect the same reaction to airgun noise as to these other sources. As explained below, military MFA sonar is very different from airguns, and one should not assume that airguns will cause the same effects as MFA sonar (including strandings).

To understand why military MFA sonar affects beaked whales differently than airguns do, it is important to note the distinction between behavioral sensitivity and susceptibility to auditory injury. To understand the potential for auditory injury in a particular marine mammal species in relation to a given acoustic signal, the frequency range the species is able to hear is critical, as well as the species' auditory sensitivity to frequencies within that range. Current data indicate that not all marine

mammal species have equal hearing capabilities across all frequencies and, therefore, species are grouped into hearing groups with generalized hearing ranges assigned on the basis of available data (Southall *et al.*, 2007, 2019). Hearing ranges as well as auditory sensitivity/susceptibility to frequencies within those ranges vary across the different groups. For example, in terms of hearing range, the high-frequency cetaceans (*e.g.*, *Kogia* spp.) have a generalized hearing range of frequencies between 275 Hz and 160 kHz, while mid-frequency cetaceans—such as dolphins and beaked whales—have a generalized hearing range between 150 Hz to 160 kHz. Regarding auditory susceptibility within the hearing range, while mid-frequency cetaceans and high-frequency cetaceans have roughly similar hearing ranges, the high-frequency group is much more susceptible to noise-induced hearing loss during sound exposure, *i.e.*, these species have lower thresholds for these effects than other hearing groups (NMFS, 2018). Referring to a species as behaviorally sensitive to noise simply means that an animal of that species is more likely to respond to lower received levels of sound than an animal of another species that is considered less behaviorally sensitive. So, while dolphin species and beaked whale species—both in the mid-frequency cetacean hearing group—are assumed to generally hear the same sounds equally well and be equally susceptible to noise-induced hearing loss (auditory injury), the best available information indicates that a beaked whale is more likely to behaviorally respond to that sound at a lower received level compared to an animal from other mid-frequency cetacean species that are less behaviorally sensitive. This distinction is important because, while beaked whales are more likely to respond behaviorally to sounds than are many other species (even at lower levels), they cannot hear the predominant, lower frequency sounds from seismic airguns as well as sounds that have more energy at frequencies that beaked whales can hear better (such as military MFA sonar).

Military MFA sonar affects beaked whales differently than airguns do because it produces energy at different frequencies than airguns. Mid-frequency cetacean hearing is generically thought to be best between 8.8 to 110 kHz, *i.e.*, these cutoff values define the range above and below which a species in the group is assumed to have declining auditory sensitivity, until reaching frequencies that cannot be heard

(NMFS, 2018). However, beaked whale hearing is likely best within a higher, narrower range (20–80 kHz, with best sensitivity around 40 kHz), based on a few measurements of hearing in stranded beaked whales (Cook *et al.*, 2006; Finneran *et al.*, 2009; Pacini *et al.*, 2011) and several studies of acoustic signals produced by beaked whales (*e.g.*, Frantziis *et al.*, 2002; Johnson *et al.*, 2004, 2006; Zimmer *et al.*, 2005). While precaution requires that the full range of audibility be considered when assessing risks associated with noise exposure (Southall *et al.*, 2007, 2019), animals typically produce sound at frequencies where they hear best. More recently, Southall *et al.* (2019) suggested that certain species in the historical mid-frequency hearing group (beaked whales, sperm whales, and killer whales) are likely more sensitive to lower frequencies within the group's generalized hearing range than are other species within the group, and state that the data for beaked whales suggest sensitivity to approximately 5 kHz. However, this information is consistent with the general conclusion that beaked whales (and other mid-frequency cetaceans) are relatively insensitive to the frequencies where most energy of an airgun signal is found. Military MFA sonar is typically considered to operate in the frequency range of approximately 3–14 kHz (D'Amico *et al.*, 2009), *i.e.*, outside the range of likely best hearing for beaked whales but within or close to the lower bounds, whereas most energy in an airgun signal is radiated at much lower frequencies, below 500 Hz (Dragoset, 1990).

It is important to distinguish between energy (loudness, measured in dB) and frequency (pitch, measured in Hz). In considering the potential impacts of mid-frequency components of airgun noise (1–10 kHz, where beaked whales can be expected to hear) on marine mammal hearing, one needs to account for the energy associated with these higher frequencies and determine what energy is truly “significant.” Although there is mid-frequency energy associated with airgun noise (as expected from a broadband source), airgun sound is predominantly below 1 kHz (Breitzke *et al.*, 2008; Tashmukhambetov *et al.*, 2008; Tolstoy *et al.*, 2009). As stated by Richardson *et al.* (1995), “[. . .] most emitted [seismic airgun] energy is at 10–120 Hz, but the pulses contain some energy up to 500–1,000 Hz.” Tolstoy *et al.* (2009) conducted empirical measurements, demonstrating that sound energy levels associated with airguns were at least 20 dB lower at 1 kHz (considered “mid-

frequency”) compared to higher energy levels associated with lower frequencies (below 300 Hz) (“all but a small fraction of the total energy being concentrated in the 10–300 Hz range” [Tolstoy *et al.*, 2009]), and at higher frequencies (*e.g.*, 2.6–4 kHz), power might be less than 10 percent of the peak power at 10 Hz (Yoder, 2002). Energy levels measured by Tolstoy *et al.* (2009) were even lower at frequencies above 1 kHz. In addition, as sound propagates away from the source, it tends to lose higher-frequency components faster than low-frequency components (*i.e.*, low-frequency sounds typically propagate longer distances than high-frequency sounds) (Diebold *et al.*, 2010). Although higher-frequency components of airgun signals have been recorded, it is typically in surface-ducting conditions (*e.g.*, DeRuiter *et al.*, 2006; Madsen *et al.*, 2006) or in shallow water, where there are advantageous propagation conditions for the higher frequency (but low-energy) components of the airgun signal (Hermannsen *et al.*, 2015). This should not be of concern because the likely behavioral reactions of beaked whales that can result in acute physical injury would result from noise exposure at depth (because of the potentially greater consequences of severe behavioral reactions). In summary, the frequency content of airgun signals is such that beaked whales will not be able to hear the signals well (compared to MFA sonar), especially at depth where we expect the consequences of noise exposure could be more severe.

Aside from frequency content, there are other significant differences between MFA sonar signals and the sounds produced by airguns that minimize the risk of severe behavioral reactions that could lead to strandings or deaths at sea, *e.g.*, significantly longer signal duration, horizontal sound direction, typical fast and unpredictable source movement. All of these characteristics of MFA sonar tend towards greater potential to cause severe behavioral or physiological reactions in exposed beaked whales that may contribute to stranding. Although both sources are powerful, MFA sonar contains significantly greater energy in the mid-frequency range, where beaked whales hear better. Short-duration, high energy pulses—such as those produced by airguns—have greater potential to cause damage to auditory structures (though this is unlikely for mid-frequency cetaceans, as explained later in this document), but it is longer duration signals that have been implicated in the vast majority of beaked whale strandings. Faster, less predictable movements in combination

with multiple source vessels are more likely to elicit a severe, potentially anti-predator response. Of additional interest in assessing the divergent characteristics of MFA sonar and airgun signals and their relative potential to cause stranding events or deaths at sea is the similarity between the MFA sonar signals and stereotyped calls of beaked whales’ primary predator: the killer whale (Zimmer and Tyack, 2007). Although generic disturbance stimuli—as airgun noise may be considered in this case for beaked whales—may also trigger antipredator responses, stronger responses should generally be expected when perceived risk is greater, as when the stimulus is confused for a known predator (Frid and Dill, 2002). In addition, because the source of the perceived predator (*i.e.*, MFA sonar) will likely be closer to the whales (because attenuation limits the range of detection of mid-frequencies) and moving faster (because it will be on faster-moving vessels), any antipredator response would be more likely to be severe (with greater perceived predation risk, an animal is more likely to disregard the cost of the response; Frid and Dill, 2002). Indeed, when analyzing movements of a beaked whale exposed to playback of killer whale predation calls, Allen *et al.* (2014) found that the whale engaged in a prolonged, directed avoidance response, suggesting a behavioral reaction that could pose a risk factor for stranding. Overall, these significant differences between sound from MFA sonar and the mid-frequency sound component from airguns and the likelihood that MFA sonar signals will be interpreted in error as a predator are critical to understanding the likely risk of behaviorally-mediated injury due to seismic surveys.

The available scientific literature also provides a useful contrast between airgun noise and MFA sonar regarding the likely risk of behaviorally-mediated injury. There is strong evidence for the association of beaked whale stranding events with MFA sonar use, and particularly detailed accounting of several events is available (*e.g.*, a 2000 Bahamas stranding event for which investigators concluded that MFA sonar use was responsible; Evans and England, 2001). D’Amico *et al.*, (2009) reviewed 126 beaked whale mass stranding events over the period from 1950 (*i.e.*, from the development of modern MFA sonar systems) through 2004. Of these, there were two events where detailed information was available on both the timing and location of the stranding and the concurrent nearby naval activity,

including verification of active MFA sonar usage, with no evidence for an alternative cause of stranding. An additional 10 events were at minimum spatially and temporally coincident with naval activity likely to have included MFA sonar use and, despite incomplete knowledge of timing and location of the stranding or the naval activity in some cases, there was no evidence for an alternative cause of stranding. The U.S. Navy has publicly stated agreement that five such events since 1996 were associated in time and space with MFA sonar use, either by the U.S. Navy alone or in joint training exercises with the North Atlantic Treaty Organization. The U.S. Navy additionally noted that, as of 2017, a 2014 beaked whale stranding event in Crete coincident with naval exercises was under review and had not yet been determined to be linked to sonar activities (U.S. Navy, 2017). Separately, the International Council for the Exploration of the Sea reported in 2005 that, worldwide, there have been about 50 known strandings, consisting mostly of beaked whales, with a potential causal link to MFA sonar (ICES, 2005). In contrast, very few such associations have been made to seismic surveys, despite widespread use of airguns as a geophysical sound source in numerous locations around the world.

A review of possible stranding associations with seismic surveys (Castellote and Llorens, 2016) states that, “[s]peculation concerning possible links between seismic survey noise and cetacean strandings is available for a dozen events but without convincing causal evidence.” The authors’ search of available information found 10 events worth further investigation via a ranking system representing a rough metric of the relative level of confidence offered by the data for inferences about the possible role of the seismic survey in a given stranding event. Only three of these events involved beaked whales. Whereas D’Amico *et al.*, (2009) used a 1–5 ranking system, in which “1” represented the most robust evidence connecting the event to MFA sonar use, Castellote and Llorens (2016) used a 1–6 ranking system, in which “6” represented the most robust evidence connecting the event to the seismic survey. As described above, D’Amico *et al.* (2009) found that two events were ranked “1” and 10 events were ranked “2” (*i.e.*, 12 beaked whale stranding events were found to be associated with MFA sonar use). In contrast, Castellote and Llorens (2016) found that none of the three beaked whale stranding events achieved their highest ranks of 5 or 6.

Of the 10 total events, none achieved the highest rank of 6. Two events were ranked as 5: one stranding in Peru involving dolphins and porpoises and a 2008 stranding in Madagascar. This latter ranking can only be broadly associated with the survey itself, as opposed to use of seismic airguns. An investigation of this stranding event, which did not involve beaked whales, concluded that use of a high-frequency mapping system (12-kHz multibeam echosounder) was the most plausible and likely initial behavioral trigger of the event, which was likely exacerbated by several site- and situation-specific secondary factors. The review panel found that seismic airguns were used after the initial strandings and animals entering a lagoon system, that airgun use clearly had no role as an initial trigger, and that there was no evidence that airgun use dissuaded animals from leaving (Southall *et al.*, 2013).

However, one of these stranding events, involving two Cuvier's beaked whales, was contemporaneous with and reasonably associated spatially with a 2002 seismic survey in the Gulf of California conducted by Lamont-Doherty Earth Observatory (L-DEO), as was the case for the 2007 Gulf of Cadiz seismic survey discussed by Castellote and Llorens (also involving two Cuvier's beaked whales). Neither event was considered a "true atypical mass stranding" (according to Frantzis (1998)) as used in the analysis of Castellote and Llorens (2016). While we agree with the authors that this lack of evidence should not be considered conclusive, it is clear that there is very little evidence that seismic surveys should be considered as posing a significant risk of acute harm to beaked whales or other mid-frequency cetaceans. We have considered the potential for the proposed surveys to result in marine mammal stranding and, based on the best available information, do not expect a stranding to occur.

Entanglement—Entanglements occur when marine mammals become wrapped around cables, lines, nets, or other objects suspended in the water column. During seismic operations, numerous cables, lines, and other objects primarily associated with the airgun array and hydrophone streamers will be towed behind the *Sikuliaq* near the water's surface. However, we are not aware of any cases of entanglement of marine mammals in seismic survey equipment. No incidents of entanglement of marine mammals with seismic survey gear have been documented in over 54,000 nautical miles (100,000 km) of previous NSF-funded seismic surveys when observers

were aboard (*e.g.*, Smultea and Holst 2003; Haley and Koski 2004; Holst 2004; Smultea *et al.*, 2004; Holst *et al.*, 2005a; Haley and Ireland 2006; SIO and NSF 2006b; Hauser *et al.*, 2008; Holst and Smultea 2008). Although entanglement with the streamer is theoretically possible, it has not been documented during tens of thousands of miles of NSF-sponsored seismic cruises or, to our knowledge, during hundreds of thousands of miles of industrial seismic cruises. There are relatively few deployed devices, and no interaction between marine mammals and any such device has been recorded during prior NSF surveys using the devices. There are no meaningful entanglement risks posed by the proposed survey, and entanglement risks are not discussed further in this document.

Anticipated Effects on Marine Mammal Habitat

Effects to Prey—Marine mammal prey varies by species, season, and location and, for some, is not well documented. Fish react to sounds which are especially strong and/or intermittent low-frequency sounds, and behavioral responses such as flight or avoidance are the most likely effects. However, the reaction of fish to airguns depends on the physiological state of the fish, past exposures, motivation (*e.g.*, feeding, spawning, migration), and other environmental factors. Several studies have demonstrated that airgun sounds might affect the distribution and behavior of some fishes, potentially impacting foraging opportunities or increasing energetic costs (*e.g.*, Fewtrell and McCauley, 2012; Pearson *et al.*, 1992; Skalski *et al.*, 1992; Santulli *et al.*, 1999; Paxton *et al.*, 2017), though the bulk of studies indicate no or slight reaction to noise (*e.g.*, Miller and Cripps, 2013; Dalen and Knutsen, 1987; Pena *et al.*, 2013; Chapman and Hawkins, 1969; Wardle *et al.*, 2001; Sara *et al.*, 2007; Jorgenson and Gyselman, 2009; Blaxter *et al.*, 1981; Cott *et al.*, 2012; Boeger *et al.*, 2006), and that, most commonly, while there are likely to be impacts to fish as a result of noise from nearby airguns, such effects will be temporary. For example, investigators reported significant, short-term declines in commercial fishing catch rate of gadid fishes during and for up to 5 days after seismic survey operations, but the catch rate subsequently returned to normal (Engas *et al.*, 1996; Engas and Lokkeborg, 2002). Other studies have reported similar findings (Hassel *et al.*, 2004).

Skalski *et al.*, (1992) also found a reduction in catch rates—for rockfish (*Sebastes* spp.) in response to controlled

airgun exposure—but suggested that the mechanism underlying the decline was not dispersal but rather decreased responsiveness to baited hooks associated with an alarm behavioral response. A companion study showed that alarm and startle responses were not sustained following the removal of the sound source (Pearson *et al.*, 1992). Therefore, Skalski *et al.* (1992) suggested that the effects on fish abundance may be transitory, primarily occurring during the sound exposure itself. In some cases, effects on catch rates are variable within a study, which may be more broadly representative of temporary displacement of fish in response to airgun noise (*i.e.*, catch rates may increase in some locations and decrease in others) than any long-term damage to the fish themselves (Streever *et al.*, 2016).

Sound pressure levels of sufficient strength have been known to cause injury to fish and fish mortality and, in some studies, fish auditory systems have been damaged by airgun noise (McCauley *et al.*, 2003; Popper *et al.*, 2005; Song *et al.*, 2008). However, in most fish species, hair cells in the ear continuously regenerate and loss of auditory function likely is restored when damaged cells are replaced with new cells. Halvorsen *et al.* (2012) showed that a TTS of 4–6 dB was recoverable within 24 hours for one species. Impacts would be most severe when the individual fish is close to the source and when the duration of exposure is long; both of which are conditions unlikely to occur for this survey that is necessarily transient in any given location and likely result in brief, infrequent noise exposure to prey species in any given area. For this survey, the sound source is constantly moving, and most fish would likely avoid the sound source prior to receiving sound of sufficient intensity to cause physiological or anatomical damage. In addition, ramp-up may allow certain fish species the opportunity to move further away from the sound source.

A comprehensive review (Carroll *et al.*, 2017) found that results are mixed as to the effects of airgun noise on the prey of marine mammals. While some studies suggest a change in prey distribution and/or a reduction in prey abundance following the use of seismic airguns, others suggest no effects or even positive effects in prey abundance. As one specific example, Paxton *et al.* (2017), which describes findings related to the effects of a 2014 seismic survey on a reef off of North Carolina, showed a 78 percent decrease in observed nighttime abundance for certain species.

It is important to note that the evening hours during which the decline in fish habitat use was recorded (via video recording) occurred on the same day that the seismic survey passed, and no subsequent data is presented to support an inference that the response was long-lasting. Additionally, given that the finding is based on video images, the lack of recorded fish presence does not support a conclusion that the fish actually moved away from the site or suffered any serious impairment. In summary, this particular study corroborates prior studies indicating that a startle response or short-term displacement should be expected.

Available data suggest that cephalopods are capable of sensing the particle motion of sounds and detect low frequencies up to 1–1.5 kHz, depending on the species, and so are likely to detect airgun noise (Kaifu *et al.*, 2008; Hu *et al.*, 2009; Mooney *et al.*, 2010; Samson *et al.*, 2014). Auditory injuries (lesions occurring on the statocyst sensory hair cells) have been reported upon controlled exposure to low-frequency sounds, suggesting that cephalopods are particularly sensitive to low-frequency sound (Andre *et al.*, 2011; Sole *et al.*, 2013). Behavioral responses, such as inking and jetting, have also been reported upon exposure to low-frequency sound (McCauley *et al.*, 2000b; Samson *et al.*, 2014). Similar to fish, however, the transient nature of the survey leads to an expectation that effects will be largely limited to behavioral reactions and would occur as a result of brief, infrequent exposures.

With regard to potential impacts on zooplankton, McCauley *et al.* (2017) found that exposure to airgun noise resulted in significant depletion for more than half the taxa present and that there were two to three times more dead zooplankton after airgun exposure compared with controls for all taxa, within 1 km of the airguns. However, the authors also stated that in order to have significant impacts on r-selected species (*i.e.*, those with high growth rates and that produce many offspring) such as plankton, the spatial or temporal scale of impact must be large in comparison with the ecosystem concerned, and it is possible that the findings reflect avoidance by zooplankton rather than mortality (McCauley *et al.*, 2017). In addition, the results of this study are inconsistent with a large body of research that generally finds limited spatial and temporal impacts to zooplankton as a result of exposure to airgun noise (*e.g.*, Dalen and Knutsen, 1987; Payne, 2004; Stanley *et al.*, 2011). Most prior research on this topic, which has focused on

relatively small spatial scales, has showed minimal effects (*e.g.*, Kostyuchenko, 1973; Booman *et al.*, 1996; Sætre and Ona, 1996; Pearson *et al.*, 1994; Bolle *et al.*, 2012).

A modeling exercise was conducted as a follow-up to the McCauley *et al.* (2017) study (as recommended by McCauley *et al.*), in order to assess the potential for impacts on ocean ecosystem dynamics and zooplankton population dynamics (Richardson *et al.*, 2017). Richardson *et al.* (2017) found that for copepods with a short life cycle in a high-energy environment, a full-scale airgun survey would impact copepod abundance up to 3 days following the end of the survey, suggesting that effects such as those found by McCauley *et al.* (2017) would not be expected to be detectable downstream of the survey areas, either spatially or temporally.

Notably, a more recently described study produced results inconsistent with those of McCauley *et al.* (2017). Researchers conducted a field and laboratory study to assess if exposure to airgun noise affects mortality, predator escape response, or gene expression of the copepod *Calanus finmarchicus* (Fields *et al.*, 2019). Immediate mortality of copepods was significantly higher, relative to controls, at distances of 5 m or less from the airguns. Mortality 1 week after the airgun blast was significantly higher in the copepods placed 10 m from the airgun but was not significantly different from the controls at a distance of 20 m from the airgun. The increase in mortality, relative to controls, did not exceed 30 percent at any distance from the airgun. Moreover, the authors caution that even this higher mortality in the immediate vicinity of the airguns may be more pronounced than what would be observed in free-swimming animals due to increased flow speed of fluid inside bags containing the experimental animals. There were no sublethal effects on the escape performance or the sensory threshold needed to initiate an escape response at any of the distances from the airgun that were tested. Whereas McCauley *et al.* (2017) reported an SEL of 156 dB at a range of 509–658 m, with zooplankton mortality observed at that range, Fields *et al.* (2019) reported an SEL of 186 dB at a range of 25 m, with no reported mortality at that distance. Regardless, if we assume a worst-case likelihood of severe impacts to zooplankton within approximately 1 km of the acoustic source, the brief time to regeneration of the potentially affected zooplankton populations does not lead us to expect any meaningful follow-on

effects to the prey base for marine mammals.

A review article concluded that, while laboratory results provide scientific evidence for high-intensity and low-frequency sound-induced physical trauma and other negative effects on some fish and invertebrates, the sound exposure scenarios in some cases are not realistic to those encountered by marine organisms during routine seismic operations (Carroll *et al.*, 2017). The review finds that there has been no evidence of reduced catch or abundance following seismic activities for invertebrates, and that there is conflicting evidence for fish with catch observed to increase, decrease, or remain the same. Further, where there is evidence for decreased catch rates in response to airgun noise, these findings provide no information about the underlying biological cause of catch rate reduction (Carroll *et al.*, 2017).

In summary, impacts of the specified activity on marine mammal prey species will likely generally be limited to behavioral responses, the majority of prey species will be capable of moving out of the area during the survey, a rapid return to normal recruitment, distribution, and behavior for prey species is anticipated, and, overall, impacts to prey species will be minor and temporary. Prey species exposed to sound might move away from the sound source, experience TTS, experience masking of biologically relevant sounds, or show no obvious direct effects. Mortality from decompression injuries is possible in close proximity to a sound, but only limited data on mortality in response to airgun noise exposure are available (Hawkins *et al.*, 2014). The most likely impacts for most prey species in the survey area would be temporary avoidance of the area. The proposed survey would move through an area relatively quickly, limiting exposure to multiple impulsive sounds. In all cases, sound levels would return to ambient once the survey moves out of the area or ends and the noise source is shut down and, when exposure to sound ends, behavioral and/or physiological responses are expected to end relatively quickly (McCauley *et al.*, 2000b). The duration of fish avoidance of a given area after survey effort stops is unknown, but a rapid return to normal recruitment, distribution, and behavior is anticipated. While the potential for disruption of spawning aggregations or schools of important prey species can be meaningful on a local scale, the mobile and temporary nature of this survey and the likelihood of temporary avoidance behavior suggest that impacts would be minor.

Acoustic Habitat—Acoustic habitat is the soundscape—which encompasses all of the sound present in a particular location and time, as a whole—when considered from the perspective of the animals experiencing it. Animals produce sound for, or listen for sounds produced by, conspecifics (communication during feeding, mating, and other social activities), other animals (finding prey or avoiding predators), and the physical environment (finding suitable habitats, navigating). Together, sounds made by animals and the geophysical environment (e.g., produced by earthquakes, lightning, wind, rain, waves) make up the natural contributions to the total acoustics of a place. These acoustic conditions, termed acoustic habitat, are one attribute of an animal's total habitat.

Soundscapes are also defined by, and acoustic habitat influenced by, the total contribution of anthropogenic sound. This may include incidental emissions from sources such as vessel traffic, or may be intentionally introduced to the marine environment for data acquisition purposes (as in the use of airgun arrays). Anthropogenic noise varies widely in its frequency content, duration, and loudness and these characteristics greatly influence the potential habitat-mediated effects to marine mammals (please see also the previous discussion on masking under *Acoustic Effects*), which may range from local effects for brief periods of time to chronic effects over large areas and for long durations. Depending on the extent of effects to habitat, animals may alter their communications signals (thereby potentially expending additional energy) or miss acoustic cues (either conspecific or adventitious). For more detail on these concepts see, e.g., Barber *et al.*, 2010; Pijanowski *et al.*, 2011; Francis and Barber, 2013; Lillis *et al.*, 2014.

Problems arising from a failure to detect cues are more likely to occur when noise stimuli are chronic and overlap with biologically relevant cues used for communication, orientation, and predator/prey detection (Francis and Barber, 2013). Although the signals emitted by seismic airgun arrays are generally low frequency, they would also likely be of short duration and transient in any given area due to the nature of these surveys. As described previously, exploratory surveys such as these cover a large area but would be transient rather than focused in a given location over time and therefore would not be considered chronic in any given location.

Based on the information discussed herein, we conclude that impacts of the specified activity are not likely to have more than short-term adverse effects on any prey habitat or populations of prey species. Further, any impacts to marine mammal habitat are not expected to result in significant or long-term consequences for individual marine mammals, or to contribute to adverse impacts on their populations.

Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes proposed for authorization through the IHA, which will inform NMFS' consideration of "small numbers," the negligible impact determinations, and impacts on subsistence uses.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines "harassment" as any act of pursuit, torment, or annoyance, which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Proposed authorized takes would be by Level B harassment only, in the form of behavioral reactions and/or TTS for individual marine mammals resulting from exposure to noise from the use of seismic airguns. Based on the nature of the activity and the anticipated effectiveness of the mitigation measures (i.e., shutdown) discussed in detail below in the Proposed Mitigation section, Level A harassment is neither anticipated nor proposed to be authorized.

As described previously, no serious injury or mortality is anticipated or proposed to be authorized for this activity. Below, we describe how the proposed take numbers are estimated.

For acoustic impacts, generally speaking, we estimate take by considering: (1) acoustic thresholds above which NMFS believes the best available science indicates marine mammals will likely be behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) the number of days of activities. We note that while these factors can contribute to a basic calculation to

provide an initial prediction of potential takes, additional information that can qualitatively inform take estimates is also sometimes available (e.g., previous monitoring results or average group size). Below, we describe the factors considered here in more detail and present the proposed take estimates.

Acoustic Thresholds

NMFS recommends the use of acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur PTS of some degree (equated to Level A harassment).

Level B Harassment—Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source or exposure context (e.g., frequency, predictability, duty cycle, duration of the exposure, signal-to-noise ratio, distance to the source), the environment (e.g., bathymetry, other noises in the area, predators in the area), and the receiving animals (hearing, motivation, experience, demography, life stage, depth) and can be difficult to predict (e.g., Southall *et al.*, 2007, 2021, Ellison *et al.*, 2012). Based on what the available science indicates and the practical need to use a threshold based on a metric that is both predictable and measurable for most activities, NMFS typically uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS generally predicts that marine mammals are likely to be behaviorally harassed in a manner considered to be Level B harassment when exposed to underwater anthropogenic noise above root-mean-squared pressure received levels (RMS SPL) of 120 dB (referenced to 1 micropascal (re 1 μ Pa)) for continuous (e.g., vibratory pile driving, drilling) and above RMS SPL 160 dB re 1 μ Pa for non-explosive impulsive (e.g., seismic airguns) or intermittent (e.g., scientific sonar) sources. Generally speaking, Level B harassment take estimates based on these behavioral harassment thresholds are expected to include any likely takes by TTS as, in most cases, the likelihood of TTS occurs at distances from the source less than those at which behavioral harassment is likely. TTS of a sufficient degree can manifest as behavioral harassment, as reduced hearing sensitivity and the potential reduced opportunities to detect important signals (conspecific communication, predators, prey) may

result in changes in behavior patterns that would not otherwise occur.

SIO's proposed activity includes the use of impulsive seismic sources (*i.e.*, airguns), and therefore the 160 dB re 1 μ Pa is applicable.

Level A harassment—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0; NMFS, 2018) and the draft Updated Technical Guidance (NMFS, 2024) identify dual criteria to assess auditory injury (Level A harassment) to five

different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). This proposed IHA estimates Level A harassment using the existing Technical Guidance (NMFS, 2018) as well as the draft Updated Technical Guidance (NMFS, 2024) because at the time of the final agency decision on this request for incidental take, NMFS may have made a final agency decision on the draft Guidance.

These thresholds are provided in the tables below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS' 2018 Technical Guidance and NMFS' 2024 draft Updated Technical Guidance, both of which may be accessed at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance>.

SIO's proposed activity includes the use of impulsive seismic sources (*i.e.*, airguns).

TABLE 4—NMFS' 2018 THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT (PTS)

Hearing group	PTS onset acoustic thresholds * (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	Cell 1: $L_{pk,flat}$: 219 dB; $L_{E,LF,24h}$: 183 dB	Cell 2: $L_{E,LF,24h}$: 199 dB.
Mid-Frequency (MF) Cetaceans	Cell 3: $L_{pk,flat}$: 230 dB; $L_{E,MF,24h}$: 185 dB	Cell 4: $L_{E,MF,24h}$: 198 dB.
High-Frequency (HF) Cetaceans	Cell 5: $L_{pk,flat}$: 202 dB; $L_{E,HF,24h}$: 155 dB	Cell 6: $L_{E,HF,24h}$: 173 dB.
Phocid Pinnipeds (PW) (Underwater)	Cell 7: $L_{pk,flat}$: 218 dB; $L_{E,PW,24h}$: 185 dB	Cell 8: $L_{E,PW,24h}$: 201 dB.
Otariid Pinnipeds (OW) (Underwater)	Cell 9: $L_{pk,flat}$: 232 dB; $L_{E,OW,24h}$: 203 dB	Cell 10: $L_{E,OW,24h}$: 219 dB.

*Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 μ Pa, and cumulative sound exposure level (L_E) has a reference value of 1 μ Pa²s. In this table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI, 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript "flat" is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds could be exceeded in a multitude of ways (*i.e.*, varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these acoustic thresholds will be exceeded.

Based on the outcome of these comparisons/analyses using the draft Updated Technical Guidance, the low-frequency cetacean isopleth is slightly higher using the updated guidance, and the mid-frequency cetacean (renamed

high-frequency cetacean) and high-frequency cetacean (renamed very-high frequency cetacean) are the same as those calculated using the 2018 Technical Guidance. Given that the updated Level A harassment isopleths

are smaller than the proposed mitigation zone for all species (see the Proposed Mitigation section), there will be no change to the proposed take numbers or mitigation zones if/when the 2024 draft Technical Guidance is finalized.

TABLE 5—NMFS' 2024 THRESHOLDS IDENTIFYING THE ONSET OF AUDITORY INJURY (AUD INJ)

Hearing group	PTS onset acoustic thresholds * (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	Cell 1: $L_{p,0-pk,flat}$: 222 dB; $L_{E,p,LF,24h}$: 183 dB	Cell 2: $L_{E,p,LF,24h}$: 197 dB.
High-Frequency (HF) Cetaceans	Cell 3: $L_{p,0-pk,flat}$: 230 dB; $L_{E,p,HF,24h}$: 193 dB	Cell 4: $L_{E,p,HF,24h}$: 201 dB.
Very High-Frequency (VHF) Cetaceans	Cell 5: $L_{pk,0-pk,flat}$: 202 dB; $L_{E,p,VHF,24hr}$: 159 dB	Cell 6: $L_{E,p,VHF,24h}$: 181 dB.
Phocid Pinnipeds (PW) (Underwater)	Cell 7: $L_{p,0-pk,flat}$: 223 dB; $L_{E,p,PW,24h}$: 185 dB	Cell 8: $L_{E,p,PW,24h}$: 195 dB.
Otariid Pinnipeds (OW) (Underwater)	Cell 9: $L_{p,0-pk,flat}$: 230 dB; $L_{E,p,OW,24h}$: 185 dB	Cell 10: $L_{E,p,OW,24h}$: 199 dB.

*Dual metric criteria for impulsive sounds: Use whichever criteria results in the larger isopleth for calculating AUD INJ onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level criteria associated with impulsive sounds, the PK SPL criteria are recommended for consideration for non-impulsive sources.

Note: Peak sound pressure level ($L_{p,0-pk}$) has a reference value of 1 μ Pa (underwater) and 20 μ Pa (in air), and weighted cumulative sound exposure level ($L_{E,p}$) has a reference value of 1 μ Pa²s (underwater) and 20 μ Pa²s (in air). In this Table, criteria are abbreviated to be more reflective of International Organization for Standardization standards (ISO 2017; ISO 2020). The subscript "flat" is being included to indicate peak sound pressure are flat weighted or unweighted within the generalized hearing range of marine mammals underwater (*i.e.*, 7 Hz to 165 kHz) or in air (*i.e.*, 42 Hz to 52 kHz). The subscript associated with cumulative sound exposure level criteria indicates the designated marine mammal auditory weighting function (LF, HF, and VHF cetaceans, and PW, OW, PA, and OA pinnipeds) and that the recommended accumulation period is 24 hours. The weighted cumulative sound exposure level criteria could be exceeded in a multitude of ways (*i.e.*, varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these criteria will be exceeded.

Ensonified Area

Here, we describe operational and environmental parameters of the activity that are used in estimating the area ensonified above the acoustic thresholds, including source levels and transmission loss coefficient.

When the Technical Guidance was published (NMFS, 2016), in recognition of the fact that ensonified area/volume could be more technically challenging to predict because of the duration component in the new thresholds, we developed a user spreadsheet that includes tools to help predict a simple isopleth that can be used in conjunction with marine mammal density or occurrence to help predict takes. We note that because of some of the assumptions included in the methods used for these tools, we anticipate that isopleths produced are typically going to be overestimates of some degree, which may result in some degree of overestimation of Level A harassment take. However, these tools offer the best way to predict appropriate isopleths when more sophisticated 3D modeling methods are not available, and NMFS continues to develop ways to quantitatively refine these tools and will qualitatively address the output where appropriate.

The proposed survey would entail the use of a 4-airgun array with a total discharge volume of 420 in³ at a tow depth of 3 m. SIO used modeling by the L-DEO, which determines the 160 dB_{rms} radius for the airgun source down to a maximum depth of 2,000 m. Received sound levels have been predicted by L-

DEO's model (Diebold *et al.* 2010) as a function of distance from the 4-airgun array. This modeling approach uses ray tracing for the direct wave traveling from the array to the receiver and its associated source ghost (reflection at the air-water interface in the vicinity of the array), in a constant-velocity half-space (infinite homogeneous ocean layer, unbounded by a seafloor). In addition, propagation measurements of pulses from the 36-airgun array at a tow depth of 6 m have been reported in deep water (~1,600 m), intermediate water depth on the slope (~600–1,100 m), and shallow water (~50 m) in the Gulf of Mexico (Tolstoy *et al.* 2009; Diebold *et al.* 2010).

For deep and intermediate water cases, the field measurements cannot be used readily to derive the harassment isopleths, as at those sites the calibration hydrophone was located at a roughly constant depth of 350–550 m, which may not intersect all the SPL isopleths at their widest point from the sea surface down to the assumed maximum relevant water depth (~2000 m) for marine mammals. At short ranges, where the direct arrivals dominate and the effects of seafloor interactions are minimal, the data at the deep sites are suitable for comparison with modeled levels at the depth of the calibration hydrophone. At longer ranges, the comparison with the model—constructed from the maximum SPL through the entire water column at varying distances from the airgun array—is the most relevant.

In deep and intermediate water depths at short ranges, sound levels for

direct arrivals recorded by the calibration hydrophone and L-DEO model results for the same array tow depth are in good alignment (see figures 12 and 14 in Diebold *et al.* 2010). Consequently, isopleths falling within this domain can be predicted reliably by the L-DEO model, although they may be imperfectly sampled by measurements recorded at a single depth. At greater distances, the calibration data show that seafloor-reflected and sub-seafloor-refracted arrivals dominate, whereas the direct arrivals become weak and/or incoherent (see figures 11, 12, and 16 in Diebold *et al.* 2010). Aside from local topography effects, the region around the critical distance is where the observed levels rise closest to the model curve. However, the observed sound levels are found to fall almost entirely below the model curve. Thus, analysis of the Gulf of Mexico calibration measurements demonstrates that although simple, the L-DEO model is a robust tool for conservatively estimating isopleths.

The proposed low-energy survey would acquire data with the 4-airgun array at a tow depth of 3 m. For deep water (>1,000 m), we use the deep-water radii obtained from L-DEO model results down to a maximum water depth of 2,000 m for the airgun array.

L-DEO's modeling methodology is described in greater detail in SIO's application. The estimated distances to the Level B harassment isopleth for the proposed airgun configuration are shown in table 6.

TABLE 6—PREDICTED RADIAL DISTANCES FROM THE R/V SIKULIAQ SEISMIC SOURCE TO ISOPLETH CORRESPONDING TO LEVEL B HARASSMENT THRESHOLD

Airgun configuration	Tow depth (m)	Water depth (m)	Predicted distances (in m) to the Level B harassment threshold
4 105-in ³ airguns	3	>1,000	1,408

TABLE 7—MODELED RADIAL DISTANCE TO ISOPLETHS CORRESPONDING TO LEVEL A HARASSMENT THRESHOLDS

	Low frequency cetaceans	Mid frequency cetaceans	High frequency cetaceans
PTS SEL _{cum}	38.5	0	0.1
PTS Peak	12.4	NA/0	85.8

The largest distance (in bold) of the dual criteria (SEL cum or Peak) was used to estimate threshold distances and potential takes by Level A harassment.

NA not applicable or available and assumed to be 0.

Table 7 presents the modeled PTS isopleths for each cetacean hearing group based on L-DEO modeling incorporated in the companion user

spreadsheet, for the low-energy surveys with the shortest shot interval (*i.e.*, greatest potential to cause PTS based on

accumulated sound energy) (NMFS 2018).

Predicted distances to Level A harassment isopleths, which vary based

on marine mammal hearing groups, were calculated based on modeling performed by L-DEO using the Nucleus software program and the NMFS user spreadsheet, described below. The acoustic thresholds for impulsive sounds contained in the NMFS Technical Guidance were presented as dual metric acoustic thresholds using both SEL_{cum} and peak sound pressure metrics (NMFS, 2016). As dual metrics, NMFS considers onset of PTS (Level A harassment) to have occurred when either one of the two metrics is exceeded (*i.e.*, metric resulting in the largest isopleth). The SEL_{cum} metric considers both level and duration of exposure, as well as auditory weighting functions by marine mammal hearing group.

The SEL_{cum} for the 4-airgun array is derived from calculating the modified farfield signature. The farfield signature is often used as a theoretical representation of the source level. To compute the farfield signature, the source level is estimated at a large distance (right) below the array (*e.g.*, 9 km), and this level is back projected mathematically to a notional distance of 1 m from the array's geometrical center. However, it has been recognized that the source level from the theoretical farfield signature is never physically achieved at the source when the source is an array of multiple airguns separated in space (Tolstoy *et al.*, 2009). Near the source (at short ranges, distances <1 km), the pulses of sound pressure from each individual airgun in the source array do not stack constructively as they do for the theoretical farfield signature. The pulses from the different airguns spread out in time such that the source levels observed or modeled are the result of the summation of pulses from a few airguns, not the full array (Tolstoy *et al.*, 2009). At larger distances, away from the source array center, sound pressure of all the airguns in the array stack coherently, but not within one time sample, resulting in smaller source levels (a few dB) than the source level derived from the farfield signature. Because the farfield signature does not take into account the large array effect near the source and is calculated as a point source, the farfield signature is not an appropriate measure of the sound source level for large arrays. See SIO's application for further detail on acoustic modeling.

Auditory injury is unlikely to occur for mid-frequency cetaceans, given the very small modeled zones of injury for those species (all estimated zones are less than 15 m for mid-frequency

cetaceans), in context of distributed source dynamics.

In consideration of the received sound levels in the near-field as described above, we expect the potential for Level A harassment of mid-frequency cetaceans to be de minimis, even before the likely moderating effects of aversion and/or other compensatory behaviors (*e.g.*, Nachtigall *et al.*, 2018) are considered. We do not anticipate that Level A harassment is a likely outcome for any mid-frequency cetacean and do not propose to authorize any take by Level A harassment for these species.

The Level A and Level B harassment estimates are based on a consideration of the number of marine mammals that could be within the area around the operating airgun array where received levels of sound ≥ 160 dB re 1 μ Pa rms are predicted to occur. The estimated numbers are based on the densities (numbers per unit area) of marine mammals expected to occur in the area in the absence of seismic surveys. To the extent that marine mammals tend to move away from seismic sources before the sound level reaches the criterion level and tend not to approach an operating airgun array, these estimates likely overestimate the numbers actually exposed to the specified level of sound.

Marine Mammal Occurrence

In this section we provide information about the occurrence of marine mammals, including density or other relevant information which will inform the take calculations.

For the proposed survey area, SIO used density data from the U.S. Navy's Marine Species Density Database Phase III for the Mariana Islands Training and Testing (MITT) Study Area (DoN, 2018). The U.S. Navy modeled densities for two areas within the MITT: the Mariana Islands Training and Testing Representative Study Area, ~580 km to the west of the proposed survey area, and the Transit Corridor Representative Study Area surrounding Wake Island, ~120 km to the east of the proposed survey area (DoN, 2018). The proposed survey area lies between the two MITT modeled areas and does not overlap either area. As the proposed tracklines are located closer to Wake Island than the Mariana Islands, the MITT seasonal density estimates for the Transit Corridor Representative Study Area were used here. As the survey is proposed for December 2024 to January 2025, the densities for winter (December through February) were used to calculate takes for marine mammals. No densities were available for Deraniyagala's beaked whale. However,

the density for ginkgo-toothed beaked whale was applied to Deraniyagala's beaked whale and ginkgo-toothed beaked whale as a combined group, as these two species are difficult to distinguish.

Take Estimation

Here, we describe how the information provided above is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and proposed for authorization. In order to estimate the number of marine mammals predicted to be exposed to sound levels that would result in Level A or Level B harassment, radial distances from the airgun array to the predicted isopleth corresponding to the Level A harassment and Level B harassment thresholds are calculated, as described above. Those radial distances were then used to calculate the area(s) around the airgun array predicted to be ensonified to sound levels that exceed the harassment thresholds. The distance for the 160-dB Level B harassment threshold and PTS (Level A harassment) thresholds (based on L-DEO model results) was used to draw a buffer around the area expected to be ensonified (*i.e.*, the survey area). The ensonified areas were then increased by 25 percent to account for potential delays, which is equivalent to adding 25 percent to the proposed line km to be surveyed. The density for each species was then multiplied by the daily ensonified areas (increased as described above) and then multiplied by the number of survey days (14) to estimate potential takes (see appendix B of SIO's application for more information).

SIO assumed that their estimates of marine mammal exposures above harassment thresholds equate to take and requested authorization of those takes. Those estimates in turn form the basis for our proposed take authorization numbers. Based on the nature of the activity and the anticipated effectiveness of the mitigation measures (*i.e.*, shutdown) discussed in detail below in the Proposed Mitigation section, Level A harassment is neither anticipated nor proposed to be authorized. Therefore we have added SIO's estimated exposures above Level A harassment thresholds to their estimated exposures above the Level B harassment threshold to produce a total number of incidents of take by Level B harassment that is proposed for authorization. Estimated exposures and proposed take numbers for authorization are shown in table 8.

TABLE 8—ESTIMATED TAKE PROPOSED FOR AUTHORIZATION

Common name	Estimated take		Proposed authorized take ¹	Abundance	Percent of abundance
	Level B	Level A	Level B		
Blue Whale	1	0	1	150	0.37
Bryde's Whale	3	0	3	1,596	0.21
Fin Whale	1	0	1	46	1.44
Humpback Whale ²	10	0	10	2,673	0.37
Minke Whale	2	0	2	450	0.37
Sei Whale	1	0	³ 2	821	0.24
Omura's Whale	0	0	³ 1	160	0.63
Sperm Whale	25	0	25	5,146	0.48
Dwarf Sperm Whale	45	3	48	27,395	0.17
Pygmy Sperm Whale	18	1	19	11,168	0.17
Blainville's Beaked Whale	8	0	8	3,376	0.23
Cuvier's Beaked Whale	41	0	41	2,642	1.56
Longman's Beaked Whale	3	0	3	11,253	0.02
Ginko-Toothed Beaked Whale	21	0	21	7,567	0.16
Deraniyagala's Beaked Whale					
False Killer Whale	6	0	³ 10	4,218	0.24
Killer Whale	1	0	³ 5	253	1.98
Melon-Headed Whale	30	0	³ 95	16,551	0.57
Pygmy Killer Whale	1	0	³ 6	527	1.14
Short-Finned Pilot Whale	23	0	23	6,583	0.04
Bottlenose Dolphin	9	0	9	1,076	0.79
Fraser's Dolphin	28	0	28	76,476	0.04
Pantropical Spotted Dolphin	125	0	125	85,755	0.15
Risso's Dolphin	5	0	27	17,184	0.16
Rough-Toothed Dolphin	20	0	20	1,815	1.13
Spinner Dolphin	21	0	³ 98	5,232	1.87
Striped Dolphin	65	0	65	24,528	0.26

¹ Requested take authorization for marine mammals is Level A plus Level B calculated takes.

² All takes are assumed to be from the Western North Pacific DPS.

³ Takes have been increased to mean group size for the Mariana Islands based on Fulling *et al.* (2011) where available or for Hawaii (*e.g.*, Risso's dolphin and killer whale) as reported by Bradford *et al.* (2017), or Jefferson *et al.* (2015).

Proposed Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, NMFS considers two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or

stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

(2) The practicability of the measures for applicant implementation, which may consider such things as cost, and impact on operations.

Vessel-Based Visual Mitigation Monitoring

Visual monitoring requires the use of trained observers (herein referred to as visual protected species observers (PSOs)) to scan the ocean surface for the presence of marine mammals. The area to be scanned visually includes primarily the shutdown zone (SZ), within which observation of certain marine mammals requires shutdown of the acoustic source, a buffer zone, and to the extent possible depending on conditions, the surrounding waters. The buffer zone means an area beyond the SZ to be monitored for the presence of marine mammals that may enter the SZ. During pre-start clearance monitoring (*i.e.*, before ramp-up begins), the buffer

zone also acts as an extension of the SZ in that observations of marine mammals within the buffer zone would also prevent airgun operations from beginning (*i.e.*, ramp-up). The buffer zone encompasses the area at and below the sea surface from the edge of the 0–100 m SZ, out to a radius of 200 m from the edges of the airgun array (100–200 m). This 200-m zone (SZ plus buffer) represents the pre-start clearance zone. Visual monitoring of the SZ and adjacent waters (buffer plus surrounding waters) is intended to establish and, when visual conditions allow, maintain zones around the sound source that are clear of marine mammals, thereby reducing or eliminating the potential for injury and minimizing the potential for more severe behavioral reactions for animals occurring closer to the vessel. Visual monitoring of the buffer zone is intended to (1) provide additional protection to marine mammals that may be in the vicinity of the vessel during pre-start clearance, and (2) during airgun use, aid in establishing and maintaining the SZ by alerting the visual observer and crew of marine mammals that are outside of, but may approach and enter, the SZ.

During survey operations (*e.g.*, any day on which use of the airgun array is planned to occur and whenever the airgun array is in the water, whether

activated or not), a minimum of two visual PSOs must be on duty and conducting visual observations at all times during daylight hours (*i.e.*, from 30 minutes prior to sunrise through 30 minutes following sunset). Visual monitoring of the pre-start clearance zone must begin no less than 30 minutes prior to ramp-up and monitoring must continue until 1 hour after use of the airgun array ceases or until 30 minutes past sunset. Visual PSOs shall coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts and shall conduct visual observations using binoculars and the naked eye while free from distractions and in a consistent, systematic, and diligent manner.

PSOs shall establish and monitor the SZ and buffer zone. These zones shall be based upon the radial distance from the edges of the airgun array (rather than being based on the center of the array or around the vessel itself). During use of the airgun array (*i.e.*, anytime airguns are active, including ramp-up), detections of marine mammals within the buffer zone (but outside the SZ) shall be communicated to the operator to prepare for the potential shutdown of the airgun array. Any observations of marine mammals by crew members shall be relayed to the PSO team. During good conditions (*e.g.*, daylight hours; Beaufort sea state (BSS) 3 or less), visual PSOs shall conduct observations when the airgun array is not operating for comparison of sighting rates and behavior with and without use of the airgun array and between acquisition periods, to the maximum extent practicable.

Visual PSOs may be on watch for a maximum of 4 consecutive hours followed by a break of at least 1 hour between watches and may conduct a maximum of 12 hours of observation per 24-hour period. Combined observational duties (visual and acoustic but not at same time) may not exceed 12 hours per 24-hour period for any individual PSO.

Establishment of Shutdown and Pre-Start Clearance Zones

A SZ is a defined area within which occurrence of a marine mammal triggers mitigation action intended to reduce the potential for certain outcomes (*e.g.*, auditory injury, disruption of critical behaviors). The PSOs would establish a minimum SZ with a 100-m radius. The 100-m SZ would be based on radial distance from the edge of the airgun array (rather than being based on the center of the array or around the vessel itself). With certain exceptions (described below), if a marine mammal

appears within or enters this zone, the airgun array would be shut down.

The pre-start clearance zone is defined as the area that must be clear of marine mammals prior to beginning ramp-up of the airgun array and includes the SZ plus the buffer zone. Detections of marine mammals within the pre-start clearance zone would prevent airgun operations from beginning (*i.e.*, ramp-up).

The 100-m SZ is intended to be precautionary in the sense that it would be expected to contain sound exceeding the injury criteria for all cetacean hearing groups, (based on the dual criteria of SEL_{cum} and peak SPL), while also providing a consistent, reasonably observable zone within which PSOs would typically be able to conduct effective observational effort. Additionally, a 100-m SZ is expected to minimize the likelihood that marine mammals will be exposed to levels likely to result in more severe behavioral responses. Although significantly greater distances may be observed from an elevated platform under good conditions, we expect that 100 m is likely regularly attainable for PSOs using the naked eye during typical conditions. The pre-start clearance zone simply represents the addition of a buffer to the SZ, doubling the SZ size during pre-clearance.

An extended SZ of 500 m must be implemented for all beaked whales, a large whale with a calf, and groups of six or more large whales. No buffer of this extended SZ is required, as NMFS concludes that this extended SZ is sufficiently protective to mitigate harassment to these groups.

Pre-Start Clearance and Ramp-Up

Ramp-up (sometimes referred to as “soft start”) means the gradual and systematic increase of emitted sound levels from an airgun array. The intent of pre-start clearance observation (30 minutes) is to ensure no marine mammals are observed within the pre-start clearance zone (or extended SZ, for beaked whales, a large whale with a calf, and groups of six or more large whales) prior to the beginning of ramp-up. During the pre-start clearance period is the only time observations of marine mammals in the buffer zone would prevent operations (*i.e.*, the beginning of ramp-up). The intent of the ramp-up is to warn marine mammals of pending seismic survey operations and to allow sufficient time for those animals to leave the immediate vicinity prior to the sound source reaching full intensity. A ramp-up procedure, involving a stepwise increase in the number of airguns firing and total array volume

until all operational airguns are activated and the full volume is achieved, is required at all times as part of the activation of the airgun array. All operators must adhere to the following pre-start clearance and ramp-up requirements:

- The operator must notify a designated PSO of the planned start of ramp-up as agreed upon with the lead PSO; the notification time should not be less than 60 minutes prior to the planned ramp-up in order to allow the PSOs time to monitor the pre-start clearance zone (and extended SZ) for 30 minutes prior to the initiation of ramp-up (pre-start clearance);
- Ramp-ups shall be scheduled so as to minimize the time spent with the source activated prior to reaching the designated run-in;
- One of the PSOs conducting pre-start clearance observations must be notified again immediately prior to initiating ramp-up procedures and the operator must receive confirmation from the PSO to proceed;
- Ramp-up may not be initiated if any marine mammal is within the applicable shutdown or buffer zone. If a marine mammal is observed within the pre-start clearance zone (or extended SZ, for beaked whales, a large whale with a calf, and groups of six or more large whales) during the 30 minute pre-start clearance period, ramp-up may not begin until the animal(s) has been observed exiting the zones or until an additional time period has elapsed with no further sightings (15 minutes for small odontocetes, and 30 minutes for all mysticetes and all other odontocetes, including sperm whales, beaked whales, and large delphinids, such as pilot whales);
- Ramp-up must begin by activating one GI airgun and shall continue in stages, doubling the number of active elements at the commencement of each stage, with each stage lasting no less than 5 minutes. The operator must provide information to the PSO documenting that appropriate procedures were followed;
- PSOs must monitor the pre-start clearance zone and extended SZ during ramp-up, and ramp-up must cease and the source must be shut down upon detection of a marine mammal within the applicable zone. Once ramp-up has begun, detections of marine mammals within the buffer zone do not require shutdown, but such observation shall be communicated to the operator to prepare for the potential shutdown;
- Ramp-up may occur at times of poor visibility, including nighttime, if appropriate acoustic monitoring has occurred with no detections in the 30

minutes prior to beginning ramp-up. Airgun array activation may only occur at times of poor visibility where operational planning cannot reasonably avoid such circumstances;

- If the airgun array is shut down for brief periods (*i.e.*, less than 30 minutes) for reasons other than implementation of prescribed mitigation (*e.g.*, mechanical difficulty), it may be activated again without ramp-up if PSOs have maintained constant visual and/or acoustic observation and no visual or acoustic detections of marine mammals have occurred within the pre-start clearance zone (or extended SZ, where applicable). For any longer shutdown, pre-start clearance observation and ramp-up are required; and
- Testing of the airgun array involving all elements requires ramp-up. Testing limited to individual source elements or strings does not require ramp-up but does require pre-start clearance of 30 minutes.

Shutdown

The shutdown of an airgun array requires the immediate de-activation of all individual airgun elements of the array. Any PSO on duty will have the authority to call for shutdown of the airgun array if a marine mammal is detected within the applicable SZ. The operator must also establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the airgun array to ensure that shutdown commands are conveyed swiftly while allowing PSOs to maintain watch. When both visual and acoustic PSOs are on duty, all detections will be immediately communicated to the remainder of the on-duty PSO team for potential verification of visual observations by the acoustic PSO or of acoustic detections by visual PSOs. When the airgun array is active (*i.e.*, anytime one or more airguns is active, including during ramp-up) and (1) a marine mammal appears within or enters the applicable SZ and/or (2) a marine mammal (other than delphinids, see below) is detected acoustically and localized within the applicable SZ, the airgun array will be shut down. When shutdown is called for by a PSO, the airgun array will be immediately deactivated and any dispute resolved only following deactivation.

Following a shutdown, airgun activity would not resume until the marine mammal has cleared the SZ. The animal would be considered to have cleared the SZ if it is visually observed to have departed the SZ (*i.e.*, animal is not required to fully exit the buffer zone where applicable), or it has not been

seen within the SZ for 15 minutes for small odontocetes or 30 minutes for all mysticetes and all other odontocetes, including sperm whales, beaked whales, and large delphinids, such as pilot whales.

The shutdown requirement is waived for specific genera of small dolphins if an individual is detected within the SZ. The small dolphin group is intended to encompass those members of the Family Delphinidae most likely to voluntarily approach the source vessel for purposes of interacting with the vessel and/or airgun array (*e.g.*, bow riding). This exception to the shutdown requirement applies solely to the specific genera of small dolphins (*Lagenodelphis*, *Stenella*, *Steno*, and *Tursiops*).

We include this small dolphin exception because shutdown requirements for these species under all circumstances represent practicability concerns without likely commensurate benefits for the animals in question. Small dolphins are generally the most commonly observed marine mammals in the specific geographic region and would typically be the only marine mammals likely to intentionally approach the vessel. As described above, auditory injury is extremely unlikely to occur for mid-frequency cetaceans (*e.g.*, delphinids), as this group is relatively insensitive to sound produced at the predominant frequencies in an airgun pulse while also having a relatively high threshold for the onset of auditory injury (*i.e.*, permanent threshold shift).

A large body of anecdotal evidence indicates that small dolphins commonly approach vessels and/or towed arrays during active sound production for purposes of bow riding with no apparent effect observed (*e.g.*, Barkaszi *et al.*, 2012; Barkaszi and Kelly, 2018). The potential for increased shutdowns resulting from such a measure would require the *Sikuliaq* to revisit the missed track line to reacquire data, resulting in an overall increase in the total sound energy input to the marine environment and an increase in the total duration over which the survey is active in a given area. Although other mid-frequency hearing specialists (*e.g.*, large delphinids) are no more likely to incur auditory injury than are small dolphins, they are much less likely to approach vessels. Therefore, retaining a shutdown requirement for large delphinids would not have similar impacts in terms of either practicability for the applicant or corollary increase in sound energy output and time on the water. We do anticipate some benefit for a shutdown requirement for large delphinids in that it simplifies somewhat the total range of

decision-making for PSOs and may preclude any potential for physiological effects other than to the auditory system as well as some more severe behavioral reactions for any such animals in close proximity to the *Sikuliaq*.

Visual PSOs shall use best professional judgment in making the decision to call for a shutdown if there is uncertainty regarding identification (*i.e.*, whether the observed marine mammal(s) belongs to one of the delphinid genera for which shutdown is waived or one of the species with a larger SZ).

SIO must implement shutdown if a marine mammal species for which take was not authorized or a species for which authorization was granted but the authorized takes have been met approaches the Level A or Level B harassment zones. SIO must also implement shutdown if any large whale (defined as a sperm whale or any mysticete species) with a calf (defined as an animal less than two-thirds the body size of an adult observed to be in close association with an adult) and/or an aggregation of six or more large whales are observed at any distance.

Vessel Strike Avoidance Mitigation Measures

Vessel personnel should use an appropriate reference guide that includes identifying information on all marine mammals that may be encountered. Vessel operators must comply with the below measures except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question. These requirements do not apply in any case where compliance would create an imminent and serious threat to a person or vessel or to the extent that a vessel is restricted in its ability to maneuver and, because of the restriction, cannot comply.

Vessel operators and crews must maintain a vigilant watch for all marine mammals and slow down, stop their vessel, or alter course, as appropriate and regardless of vessel size, to avoid striking any marine mammal. A single marine mammal at the surface may indicate the presence of submerged animals in the vicinity of the vessel; therefore, precautionary measures should always be exercised. A visual observer aboard the vessel must monitor a vessel strike avoidance zone around the vessel (separation distances stated below). Visual observers monitoring the vessel strike avoidance zone may be third-party observers (*i.e.*, PSOs) or crew members, but crew members responsible for these duties must be provided sufficient training to (1)

distinguish marine mammals from other phenomena and (2) broadly to identify a marine mammal as a right whale, other whale (defined in this context as sperm whales or baleen whales other than right whales), or other marine mammals.

Vessel speeds must be reduced to 10 kn (18.5 kph) or less when mother/calf pairs, pods, or large assemblages of cetaceans are observed near a vessel. All vessels must maintain a minimum separation distance of 100 m from sperm whales and all other baleen whales. All vessels must, to the maximum extent practicable, attempt to maintain a minimum separation distance of 50 m from all other marine mammals, with an understanding that at times this may not be possible (e.g., for animals that approach the vessel).

When marine mammals are sighted while a vessel is underway, the vessel shall take action as necessary to avoid violating the relevant separation distance (e.g., attempt to remain parallel to the animal's course, avoid excessive speed or abrupt changes in direction until the animal has left the area). If marine mammals are sighted within the relevant separation distance, the vessel must reduce speed and shift the engine to neutral, not engaging the engines until animals are clear of the area. This does not apply to any vessel towing gear or any vessel that is navigationally constrained.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104(a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present while conducting the activities. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (e.g., presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (e.g., source characterization, propagation, ambient noise); (2) affected species (e.g., life history, dive patterns); (3) co-occurrence of marine mammal species with the activity; or (4) biological or behavioral context of exposure (e.g., age, calving or feeding areas);
- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;
- Effects on marine mammal habitat (e.g., marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and,
- Mitigation and monitoring effectiveness.

Vessel-Based Visual Monitoring

As described above, PSO observations would take place during daytime airgun operations. During seismic survey operations, at least five visual PSOs would be based aboard the *Sikuliaq*. Two visual PSOs would be on duty at all times during daytime hours. The operator will work with the selected third-party observer provider to ensure PSOs have all equipment (including backup equipment) needed to adequately perform necessary tasks, including accurate determination of distance and bearing to observed marine mammals. SIO must use dedicated, trained, and NMFS-approved PSOs. At least one visual PSO aboard the vessel must have a minimum of 90 days at-sea experience working in those roles, respectively, with no more than 18 months elapsed since the conclusion of the at-sea experience. One visual PSO with such experience shall be designated as the lead for the entire protected species observation team. The lead PSO shall serve as primary point of contact for the vessel operator and

ensure all PSO requirements per the IHA are met. To the maximum extent practicable, the experienced PSOs should be scheduled to be on duty with those PSOs with appropriate training but who have not yet gained relevant experience. The PSOs must have no tasks other than to conduct observational effort, record observational data, and communicate with and instruct relevant vessel crew with regard to the presence of marine mammals and mitigation requirements. PSO resumes shall be provided to NMFS for approval. Monitoring shall be conducted in accordance with the following requirements:

- PSOs shall be independent, dedicated, trained visual and acoustic PSOs and must be employed by a third-party observer provider;
- PSOs shall have no tasks other than to conduct observational effort (visual or acoustic), collect data, and communicate with and instruct relevant vessel crew with regard to the presence of protected species and mitigation requirements (including brief alerts regarding maritime hazards); and
- PSOs shall have successfully completed an approved PSO training course appropriate for their designated task (visual).
- NMFS must review and approve PSO resumes accompanied by a relevant training course information packet that includes the name and qualifications (i.e., experience, training completed, or educational background) of the instructor(s), the course outline or syllabus, and course reference material as well as a document stating successful completion of the course;
- PSOs must successfully complete relevant training, including completion of all required coursework and passing (80 percent or greater) a written and/or oral examination developed for the training program;
- PSOs must have successfully attained a bachelor's degree from an accredited college or university with a major in one of the natural sciences, a minimum of 30 semester hours or equivalent in the biological sciences, and at least one undergraduate course in math or statistics; and
- The educational requirements may be waived if the PSO has acquired the relevant skills through alternate experience. Requests for such a waiver shall be submitted to NMFS and must include written justification. Requests shall be granted or denied (with justification) by NMFS within 1 week of receipt of submitted information. Alternate experience that may be considered includes, but is not limited to (1) secondary education and/or

experience comparable to PSO duties; (2) previous work experience conducting academic, commercial, or government-sponsored protected species surveys; or (3) previous work experience as a PSO; the PSO should demonstrate good standing and consistently good performance of PSO duties.

- For data collection purposes, PSOs shall use standardized electronic data collection forms. PSOs shall record detailed information about any implementation of mitigation requirements, including the distance of animals to the airgun array and description of specific actions that ensued, the behavior of the animal(s), any observed changes in behavior before and after implementation of mitigation, and if shutdown was implemented, the length of time before any subsequent ramp-up of the airgun array. If required mitigation was not implemented, PSOs should record a description of the circumstances. At a minimum, the following information must be recorded:

- Vessel name, vessel size and type, maximum speed capability of vessel;
- Dates (MM/DD/YYYY) of departures and returns to port with port name;

- PSO names and affiliations, PSO ID (initials or other identifier);

- Date (MM/DD/YYYY) and participants of PSO briefings;

- Visual monitoring equipment used (description);

- PSO location on vessel and height (meters) of observation location above water surface;

- Watch status (description);

- Dates (MM/DD/YYYY) and times (Greenwich Mean Time/UTC) of survey on/off effort and times (GMC/UTC) corresponding with PSO on/off effort;

- Vessel location (decimal degrees) when survey effort began and ended and vessel location at beginning and end of visual PSO duty shifts;

- Vessel location (decimal degrees) at 30-second intervals if obtainable from data collection software, otherwise at practical regular interval;

- Vessel heading (compass heading) and speed (knots) at beginning and end of visual PSO duty shifts and upon any change;

- Water depth (meters) (if obtainable from data collection software);

- Environmental conditions while on visual survey (at beginning and end of PSO shift and whenever conditions changed significantly), including BSS and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon;

- Factors that may have contributed to impaired observations during each PSO shift change or as needed as environmental conditions changed (description) (e.g., vessel traffic, equipment malfunctions); and

- Vessel/Survey activity information (and changes thereof) (description), such as airgun power output while in operation, number and volume of airguns operating in the array, tow depth of the array, and any other notes of significance (i.e., pre-start clearance, ramp-up, shutdown, testing, shooting, ramp-up completion, end of operations, streamers, etc.).

- Upon visual observation of any marine mammals, the following information must be recorded:

- Sighting ID (numeric);

- Watch status (sighting made by PSO on/off effort, opportunistic, crew, alternate vessel/platform);

- Location of PSO/observer (description);

- Vessel activity at the time of the sighting (e.g., deploying, recovering, testing, shooting, data acquisition, other);

- PSO who sighted the animal/ID;

- Time/date of sighting (GMT/UTC, MM/DD/YYYY);

- Initial detection method (description);

- Sighting cue (description);

- Vessel location at time of sighting (decimal degrees);

- Water depth (meters);

- Direction of vessel's travel (compass direction);

- Speed (knots) of the vessel from which the observation was made;

- Direction of animal's travel relative to the vessel (description, compass heading);

- Bearing to sighting (degrees);

- Identification of the animal (e.g., genus/species, lowest possible taxonomic level, or unidentified) and the composition of the group if there is a mix of species;

- Species reliability (an indicator of confidence in identification) (1 = unsure/possible, 2 = probable, 3 = definite/sure, 9 = unknown/not recorded);

- Estimated distance to the animal (meters) and method of estimating distance;

- Estimated number of animals (high/low/best) (numeric);

- Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.);

- Description (as many distinguishing features as possible of each individual seen, including length, shape, color, pattern, scars or markings, shape and size of dorsal fin, shape of head, and blow characteristics);

- Detailed behavior observations (e.g., number of blows/breaths, number of surfaces, breaching, spyhopping, diving, feeding, traveling; as explicit and detailed as possible; note any observed changes in behavior);

- Animal's closest point of approach (meters) and/or closest distance from any element of the airgun array;

- Description of any actions implemented in response to the sighting (e.g., delays, shutdown, ramp-up) and time and location of the action;

- Photos (Yes/No);

- Photo Frame Numbers (List of numbers); and

- Conditions at time of sighting (Visibility; Beaufort Sea State).

Reporting

SIO shall submit a draft comprehensive report on all activities and monitoring results within 90 days of the completion of the survey or expiration of the IHA, whichever comes sooner. The report must describe all activities conducted and sightings of marine mammals, must provide full documentation of methods, results, and interpretation pertaining to all monitoring, and must summarize the dates and locations of survey operations and all marine mammal sightings (dates, times, locations, activities, associated survey activities). The draft report shall also include geo-referenced time-stamped vessel tracklines for all time periods during which airgun arrays were operating. Tracklines should include points recording any change in airgun array status (e.g., when the sources began operating, when they were turned off, or when they changed operational status such as from full array to single gun or vice versa). Geographic Information System files shall be provided in Environmental Systems Research Institute shapefile format and include the UTC date and time, latitude in decimal degrees, and longitude in decimal degrees. All coordinates shall be referenced to the WGS84 geographic coordinate system. In addition to the report, all raw observational data shall be made available. The report must summarize data collected as described above in Proposed Monitoring and Reporting. A final report must be submitted within 30 days following resolution of any comments on the draft report.

Reporting Injured or Dead Marine Mammals

Discovery of injured or dead marine mammals—In the event that personnel involved in the survey activities discover an injured or dead marine mammal, the SIO shall report the

incident to the Office of Protected Resources (OPR) and NMFS as soon as feasible. The report must include the following information:

- Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- Species identification (if known) or description of the animal(s) involved;
- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- If available, photographs or video footage of the animal(s); and
- General circumstances under which the animal was discovered.

Vessel strike—In the event of a strike of a marine mammal by any vessel involved in the activities covered by the authorization, SIO shall report the incident to OPR and NMFS as soon as feasible. The report must include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Vessel's speed during and leading up to the incident;
- Vessel's course/heading and what operations were being conducted (if applicable);
- Status of all sound sources in use;
- Description of avoidance measures/requirements that were in place at the time of the strike and what additional measure were taken, if any, to avoid strike;
- Environmental conditions (e.g., wind speed and direction, BSS, cloud cover, visibility) immediately preceding the strike;
- Species identification (if known) or description of the animal(s) involved;
- Estimated size and length of the animal that was struck;
- Description of the behavior of the marine mammal immediately preceding and following the strike;
- If available, description of the presence and behavior of any other marine mammals present immediately preceding the strike;
- Estimated fate of the animal (e.g., dead, injured but alive, injured and moving, blood or tissue observed in the water, status unknown, disappeared); and
- To the extent practicable, photographs or video footage of the animal(s).

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not

reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through harassment, NMFS considers other factors, such as the likely nature of any impacts or responses (e.g., intensity, duration), the context of any impacts or responses (e.g., critical reproductive time or location, foraging impacts affecting energetics), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS' implementing regulations (54 FR 40338, September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the baseline (e.g., as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, the discussion of our analysis applies to all the species listed in table 1, given that the anticipated effects of this activity on these different marine mammal stocks are expected to be similar, except where a species- or stock-specific discussion is warranted. NMFS does not anticipate that serious injury or mortality would occur as a result of SIO's planned survey, even in the absence of mitigation, and no serious injury or mortality is proposed to be authorized. As discussed in the Potential Effects of Specified Activities on Marine Mammals and Their Habitat section above, non-auditory physical effects and vessel strike are not expected to occur. NMFS expects that all potential take would be in the form of Level B behavioral harassment in the form of temporary avoidance of the area or decreased foraging (if such activity was occurring), responses that are considered to be of low severity, and with no lasting biological consequences (e.g., Southall *et al.*, 2007, 2021). These low-level impacts of behavioral harassment are not likely to impact the overall fitness of any individual or lead to population level effects of any

species. As described above, Level A harassment is not expected to occur given the estimated small size of the Level A harassment zones.

In addition, the maximum expected Level B harassment zone around the survey vessel is 1,408 m. Therefore, the ensounded area surrounding the vessel is relatively small compared to the overall distribution of animals in the area and their use of the habitat. Feeding behavior is not likely to be significantly impacted as prey species are mobile and are broadly distributed throughout the survey area; therefore, marine mammals that may be temporarily displaced during survey activities are expected to be able to resume foraging once they have moved away from areas with disturbing levels of underwater noise. Because of the short duration (14 survey days) and temporary nature of the disturbance and the availability of similar habitat and resources in the surrounding area, the impacts to marine mammals and marine mammal prey species are not expected to cause significant or long-term fitness consequences for individual marine mammals or their populations.

Additionally, the acoustic "footprint" of the proposed survey would be very small relative to the ranges of all marine mammals that would potentially be affected. Sound levels would increase in the marine environment in a relatively small area surrounding the vessel compared to the range of the marine mammals within the proposed survey area. The seismic array would be active 24 hours per day throughout the duration of the proposed survey. However, the very brief overall duration of the proposed survey (14 survey days) would further limit potential impacts that may occur as a result of the proposed activity.

Of the marine mammal species that are likely to occur in the project area, the following species are listed as endangered under the ESA: humpback whales (Western North Pacific DPS), blue whales, fin whales, sei whales, and sperm whales. The take numbers proposed for authorization for these species (table 6) are minimal relative to their modeled population sizes; therefore, we do not expect population-level impacts to any of these species. Moreover, the actual range of the populations extends past the area covered by the model, so modeled population sizes are likely smaller than their actual population size. The other marine mammal species that may be taken by harassment during SIO's seismic survey are not listed as threatened or endangered under the ESA. There is no designated critical

habitat for any ESA-listed marine mammals within the project area.

There are no rookeries, mating, or calving grounds known to be biologically important to marine mammals within the survey area, and there are no feeding areas known to be biologically important to marine mammals within the survey area.

In summary and as described above, the following factors primarily support our preliminary determination that the impacts resulting from this activity are not expected to adversely affect any of the species or stocks through effects on annual rates of recruitment or survival:

- No serious injury or mortality is anticipated or authorized;
- The proposed activity is temporary and of relatively short duration (27 days total with 14 days of planned survey activity);
- The anticipated impacts of the proposed activity on marine mammals would be temporary behavioral changes due to avoidance of the ensonified area, which is relatively small (see tables 4 and 5);
- The availability of alternative areas of similar habitat value for marine mammals to temporarily vacate the survey area during the proposed survey to avoid exposure to sounds from the activity is readily abundant;
- The potential adverse effects on fish or invertebrate species that serve as prey species for marine mammals from the proposed survey would be temporary and spatially limited and impacts to marine mammal foraging would be minimal; and

- The proposed mitigation measures are expected to reduce the number and severity of takes, to the extent practicable, by visually and/or acoustically detecting marine mammals within the established zones and implementing corresponding mitigation measures (e.g., delay; shutdown).

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted previously, only take of small numbers of marine mammals may be authorized under sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in

practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. When the predicted number of individuals to be taken is fewer than one-third of the species or stock abundance, the take is considered to be of small numbers. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

The number of takes NMFS proposes to authorize is below one-third of the modeled abundance for all relevant populations (specifically, take of individuals is less than 2 percent of the modeled abundance of each affected population, see table 6). This is conservative because the modeled abundance represents a population of the species and we assume all takes are of different individual animals, which is likely not the case. Some individuals may be encountered multiple times in a day, but PSOs would count them as separate individuals if they cannot be identified.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of marine mammals would be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act

Section 7(a)(2) of the ESA of 1973 (16 U.S.C. 1531 *et seq.*) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally whenever we propose to authorize take for endangered or threatened species.

NMFS is proposing to authorize take of humpback whales (Western North Pacific DPS), blue whales, fin whales, sei whales, and sperm whales, which are listed under the ESA. The NMFS Office of Protected Resources (OPR) Permits and Conservation Division has requested initiation of section 7 consultation with the OPR ESA Interagency Cooperation Division for the issuance of this IHA. NMFS will conclude the ESA consultation prior to reaching a determination regarding the proposed issuance of the authorization.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to SIO for conducting a marine geophysical survey in the Nauru Basin of greater Micronesia in the NW Pacific Ocean from December 2024-January 2025, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. A draft of the proposed IHA can be found at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-research-and-other-activities>.

Request for Public Comments

We request comment on our analyses, the proposed authorization, and any other aspect of this notice of proposed IHA for the proposed marine geophysical survey. We also request comment on the potential renewal of this proposed IHA as described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform decisions on the request for this IHA or a subsequent renewal IHA.

On a case-by-case basis, NMFS may issue a one-time, 1-year renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical or nearly identical activities as described in the Description of Proposed Activity section of this notice is planned or (2) the activities as described in the Description of Proposed Activity section of this notice would not be completed by the time the IHA expires and a renewal would allow for completion of the activities beyond that described in the *Dates and Duration* section of this notice, provided all of the following conditions are met:

- A request for renewal is received no later than 60 days prior to the needed renewal IHA effective date (recognizing that the renewal IHA expiration date cannot extend beyond 1 year from expiration of the initial IHA).

- The request for renewal must include the following:

(1) An explanation that the activities to be conducted under the requested renewal IHA are identical to the activities analyzed under the initial IHA, are a subset of the activities, or include changes so minor (*e.g.*, reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take).

(2) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.

- Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings in the initial IHA remain valid.

Dated: October 3, 2024.

Kimberly Damon-Randall,

*Director, Office of Protected Resources,
National Marine Fisheries Service.*

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XE296]

Takes of Marine Mammals Incidental to Specified Activities; Takes of Marine Mammals Incidental to Marine Site Characterization Surveys Off Rhode Island and Massachusetts

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued an incidental harassment authorization (IHA) to Bay State Wind, LLC (Bay State Wind), to incidentally harass marine mammals during marine site characterization surveys off the coast of Rhode Island and Massachusetts in the Bureau of Ocean Energy Management (BOEM)

Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) Lease Area OCS-A 0500 and the associated export cable route (ECR) area.

DATES: The authorization is effective from October 6, 2024, to October 5, 2025.

ADDRESSES: Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable>. In case of problems accessing these documents, please call the contact listed below.

FOR FURTHER INFORMATION CONTACT: Rachel Hilt, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the “take” of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are proposed or, if the taking is limited to harassment, a notice of a proposed IHA is provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other “means of effecting the least practicable adverse impact” on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stocks for taking for certain subsistence uses (referred to in shorthand as “mitigation”); and requirements pertaining to the monitoring and reporting of the takings. The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

History of Request

On October 6, 2022, NMFS issued an IHA to Ørsted (parent company of Bay State Wind) to take marine mammals incidental to marine site characterization surveys in Lease Areas OCS-A 0486, 0487, 0500 off the coasts from New York to Massachusetts and along potential ECRs to landfall locations between Raritan Bay (part of the New York Bight) and Falmouth, Massachusetts (87 FR 61575; October 12, 2022). On May 26, 2023, NMFS received a request for a renewal of that initial IHA because Ørsted’s marine site characterization surveys under the initial IHA had not yet been completed and more time was required. The renewal IHA was issued on September 29, 2023 (88 FR 62337, October 5, 2023). Ørsted has complied with all the requirements (*e.g.*, mitigation, monitoring, and reporting) of the previous IHAs in Lease Areas OCS-A 0486, 0487, and 0500.

On March 27, 2024, NMFS received a request from Bay State Wind for an IHA to take marine mammals incidental to conducting marine site characterization surveys off the coasts of Rhode Island and Massachusetts. This request was limited to planned survey activity in OCS-A 0500 (*i.e.*, Ørsted’s planned Bay State Wind development) and the associated ECR area. Following NMFS’ review of the application, Bay State Wind submitted a revised version on June 10, 2024. Following additional review of the application, Bay State Wind submitted another revised version on July 29, 2024, which was deemed adequate and complete on August 1, 2024. Bay State Wind’s request is for take of 17 species of marine mammals, by Level B harassment only. Neither Bay State Wind nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate. There are no changes from the proposed IHA to the final IHA.

Description of the Activity and Anticipated Impacts

Overview

Bay State Wind will conduct marine site characterization surveys, including high-resolution geophysical (HRG) surveys and geotechnical surveys, in BOEM Lease Area OCS-A 0500, and the associated ECR. The purpose of the marine site characterization surveys is to collect data concerning seabed (geophysical, geotechnical, and geohazard), ecological, and archeological conditions within the footprint of the offshore wind facility development. Surveys are also conducted to support engineering

design and to map unexploded ordnance (UXO). Underwater sound resulting from Bay State Wind's proposed activities, specifically HRG surveys, has the potential to result in incidental take of 17 species, in the form of Level B harassment only.

Dates and Duration

While the exact dates have not yet been established, the activities are planned to begin as soon as possible upon issuance of an IHA, if appropriate. The activity is expected to require up to 350 survey days across a maximum of four vessels operating concurrently over

the course of a single year ("survey day" defined as a 24-hour activity period in which the assumed number of line kilometers (km) are surveyed). Vessel days are defined as the number of days any single vessel is in operation regardless of any other vessel operations (*i.e.*, if two vessels are working concurrently within the same 24-hour period, each vessel would be counted as having a vessel day for a total of two vessel days even though the activity occurs within a single 24-hour period). The number of anticipated survey days was calculated as the number of days

needed to reach the overall level of effort required to meet survey objectives assuming any single vessel covers, on average 70 line km per 24-hour operations.

Specific Geographic Region

The survey activities will occur within the Lease Area and potential ECRs off the coasts of Rhode Island and Massachusetts (figure 1). Water depths in the Lease Area and potential ECRs extend out from shoreline to approximately 90 meters (m).

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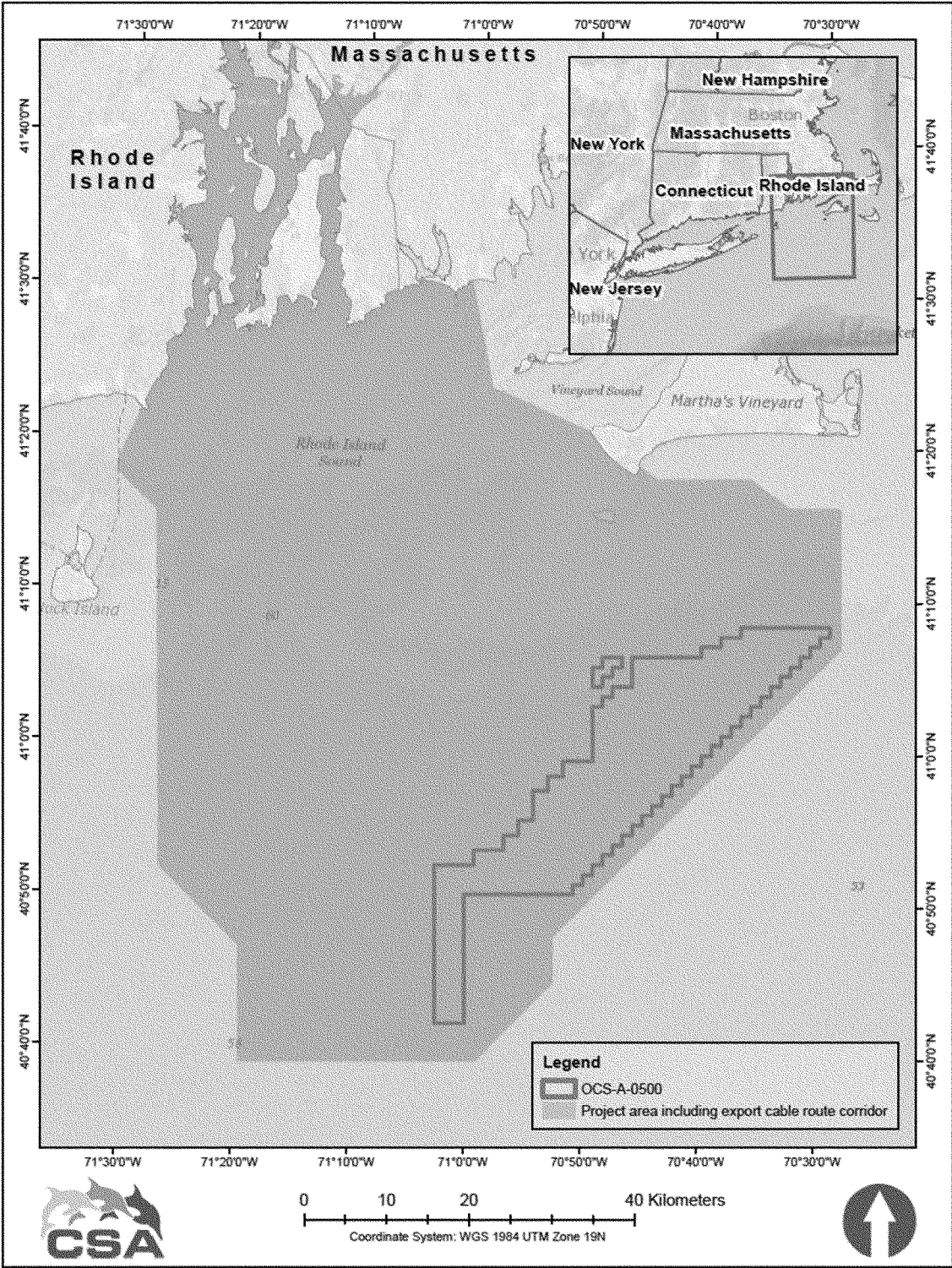


Figure 1. Lease Area and potential ECRs for the site characterization surveys, indicated in gray, which includes the Lease Area and the potential export cable route area.

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Detailed Description of the Specified Activity

A detailed description of the planned site characterization surveys is provided

in the **Federal Register** notice for the proposed IHA (89 FR 67597, August 21, 2024). The nature of the specified activities, including the types of HRG equipment planned for use (e.g.,

CHIRPs, boomers, and sparkers), daily trackline distances (70 line km per 24-hr period), and number of survey vessels (up to four operating concurrently), are identical to those described in the previous notice.

Comments and Responses

A notice of NMFS' proposal to issue an IHA to Bay State Wind was published in the **Federal Register** on August 21, 2024 (89 FR 6759). That notice described, in detail, or referenced descriptions of Bay State Wind's activity, the marine mammal species that may be affected by the activity, the anticipated effects on marine mammals and their habitat, estimated number and manner of take, and proposed mitigation, monitoring and reporting measures.

During the 30-day public comment period, NMFS received one substantive comment letter, from the Wampanoag Tribe of Gay Head (Aquinnah) (Tribe). We reiterate here that NMFS' proposed action concerns only the authorization of marine mammal take incidental to the planned surveys—NMFS' authority under the MMPA does not extend to the surveys themselves or to wind energy development more generally. Comments from the Wampanoag Tribe of Gay Head (Aquinnah) (Tribe)'s letter considered out of scope include (1) a request that NMFS fully study the implications of the Vineyard Wind blade failure on marine mammals “prior to any further federal action concerning offshore wind farms,” (2) general opposition to authorization of take incidental to any activities associated with offshore wind development until “the Coast Guard has finished establishing shipping safety fairways,” a statement that “offshore wind development needs to be balanced with navigational safety,” and criticism of NMFS and BOEM for allegedly “improperly segmenting offshore wind activities in the Atlantic Ocean.” All substantive comments, and NMFS' responses, are provided below. The comments and recommendations are available online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable>. Please see the comment submissions for full details regarding the recommendations and supporting rationale.

Comment 1: The Tribe asserted generally that NMFS is not appropriately complying with Executive Order 13175, which requires meaningful government-to-government consultation with tribes on matters that have implications for tribes.

Response: NMFS is committed to engaging with the Tribe moving forward. However, for the reasons included in this notice, we disagree that no IHAs for HRG surveys should be renewed in the New York Bight pending engagement with the Tribe.

Comment 2: The Tribe stated they do not agree that use of a Categorical Exclusion (CE) under National Environmental Policy Act (NEPA) is appropriate, suggesting that NMFS must conduct additional analysis of the cumulative impact of projects in the Massachusetts and Rhode Island offshore area, especially to Endangered Species Act (ESA)-listed species, and particularly to the North Atlantic right whale (NARW).

Response: NMFS disagrees with the commenter's statement and has determined that the issuance of the IHA qualifies to be categorically excluded from further NEPA review. A CE is a category of actions that an agency has determined does not individually or cumulatively have a significant effect on the quality of the human environment and is appropriately applied for such categories of actions so long as there are no extraordinary circumstances present that would indicate that the effects of the action may be significant. Extraordinary circumstances are situations for which NOAA has determined further NEPA analysis is required because they are circumstances in which a normally excluded action may have significant effects. A determination of whether an action that is normally excluded requires additional evaluation because of extraordinary circumstances focuses on the action's potential effects and considers the significance of those effects in terms of both context (consideration of the affected region, interests, and resources) and intensity (severity of impacts). Potential extraordinary circumstances relevant to this action include: (1) adverse effects on species or habitats protected by the MMPA that are not negligible; (2) highly controversial environmental effects; (3) environmental effects that are uncertain, unique, or unknown; and (4) the potential for significant cumulative impacts when the proposed action is combined with other past, present, and reasonably foreseeable future actions.

The relevant NOAA CE associated with issuance of incidental take authorizations is CE B4, “Issuance of incidental harassment authorizations under section 101(a)(5)(A) and (D) of the MMPA for the incidental, but not intentional, take by harassment of marine mammals during specified activities and for which no serious

injury or mortality is anticipated.” This action falls within CE B4. In determining whether a CE is appropriate for a given incidental take authorization, NMFS considers the applicant's specified activity and the potential extent and magnitude of takes of marine mammals associated with that activity along with the extraordinary circumstances listed in the Companion Manual for NOAA Administrative Order (NAO) 216–6A and summarized above.

The evaluation of whether extraordinary circumstances (if present) have the potential for significant environmental effects is limited to the decision NMFS is responsible for, which is issuance of the incidental take authorization. Potential effects of NMFS' action are limited to those that would occur due to the authorization of incidental take of marine mammals. NMFS prepared numerous EAs analyzing the environmental impacts of the categories of activities encompassed by CE B4, which resulted in Findings of No Significant Impacts (FONSI) and, in particular, numerous EAs prepared in support of issuance of IHAs related to similar survey actions are part of NMFS' administrative record supporting CE B4. These EAs demonstrate the issuance of a given incidental harassment authorization does not affect other aspects of the human environment because the action only affects the marine mammals that are the subject of the incidental harassment authorization.

Specifically for this action, NMFS independently evaluated the use of the CE for issuance of Bay State Wind's IHA, which included consideration of extraordinary circumstances. As part of that analysis, NMFS considered whether this IHA issuance would result in cumulative impacts that could be significant. In particular, the issuance of an IHA to Bay State Wind is expected to result in minor, short-term behavioral effects on marine mammal species due to exposure to underwater sound from site characterization survey activities. Behavioral disturbance is possible to occur intermittently in the vicinity of Bay State Wind's survey area during the 1-year timeframe. Level B harassment will be reduced through use of mitigation measures described herein. Additionally, as discussed elsewhere, NMFS has determined that Bay State Wind's activities fall within the scope of activities analyzed in Greater Atlantic Regional Fisheries Office's (GARFO's) programmatic consultation regarding geophysical surveys along the U.S. Atlantic coast in the three Atlantic Renewable Energy Regions (completed June 29, 2021; revised September 2021), which concluded surveys such as those

planned by Bay State Wind are not likely to adversely affect ESA-listed species or adversely modify or destroy critical habitat. Accordingly, NMFS has determined that the issuance of this IHA will result in no more than negligible (as that term is defined by the Companion Manual for NAO 216–6A) adverse effects on species protected by the ESA and the MMPA.

Further, the issuance of this IHA will not result in highly controversial environmental effects or result in environmental effects that are uncertain, unique, or unknown because numerous entities have been engaged in site characterization surveys that result in Level B harassment of marine mammals in the United States. This type of activity is well documented; prior authorizations and analysis demonstrates issuance of an IHA for this type of action only affects the marine mammals that are the subject of the specific authorization and, thus, no potential for significant cumulative impacts are expected, regardless of past, present, or reasonably foreseeable actions, even though the impacts of the action may not be significant by itself. Based on this evaluation, we concluded that the issuance of the IHA qualifies to be categorically excluded from further NEPA review.

The commenters did not provide any new or compelling evidence that suggests that wind energy development activities have the potential to negatively impact NARW. NMFS recognizes and appreciates the importance of the NARW as an integral part of traditional lifeways and cultural practices. However, NMFS emphasizes that there is no credible scientific evidence available suggesting that mortality and/or serious injury or Level A harassment is a potential outcome of the planned survey activity, and no additional evidence was presented by the commenter. NMFS notes there have never been reports of any serious injuries or mortalities of any marine mammal associated with site characterization surveys. The best available science indicates that Level B harassment, or disruption of behavioral patterns, may occur as a result of Bay State Wind's specified activities. This point has been well supported by other agencies, including the BOEM and the Marine Mammal Commission (Marine Mammal Commission Newsletter, Spring 2023). In addition, a recent study by Thorne and Wiley (2024) reviewed spatiotemporal patterns of strandings,

mortalities, and serious injuries of humpback whales along the U.S. east coast from 2016–2022 and found vessel strikes to be the major driver in the increase of humpback whale strandings, mortalities, and serious injuries. Based upon the spatiotemporal analysis, no evidence was found that offshore wind development played a role in the increased number of strandings over time; for example, spatiotemporal patterns between strandings and site assessment surveys did not seem associated. In fact, the potential for vessel strike increased from 2016–2022 in association with increased container vessel traffic that overlapped with whales in new and shallow foraging areas. This potential for vessel strike also seemed to increase with the increased presence of juvenile humpback whales foraging off the Mid-Atlantic States. Under the IHA, NMFS requires Bay State Wind to abide by vessel speed restrictions and maintain separation distances between vessels and marine mammals that are intended to minimize the risk of any potential vessel strikes. The impacts of Level B harassment (*i.e.*, behavioral disturbance) are expected to have a negligible impact on the NARW population as well as other potentially impacted marine mammal populations. NMFS has made the required findings based on the best scientific information available and has included mitigation measures to effect the least practicable adverse impacts on NARWs and other potentially impacted marine mammals. There is an active unusual mortality event (UME) for NARWs that began in June 2017. Overall, preliminary findings support human interactions, specifically vessel strikes and entanglements, as the cause of death for the majority of right whales. NMFS will continue to gather data to help us determine the cause of death for stranded whales. Vessel strikes and entanglement in fishing gear continue to be the greatest human threats to large whales.

Description of Marine Mammals in the Area of Specified Activities

A detailed description of the species likely to be affected by Bay State Wind's marine site characterization surveys, including brief introductions to the species and relevant stocks as well as available information regarding population trends and threats, and information regarding local occurrence, were provided in sections 3 and 4 of the application, the **Federal Register** notice

of the proposed IHA (89 FR 67597, August 21, 2024), and the **Federal Register** notice of the proposed IHA for the 2022 IHA (87 FR 52515, August 26, 2022) addressing Lease Areas OCS–A 0486, 0487, and 0500. NMFS fully considered all of this information, and we refer the reader to these descriptions, instead of reprinting the information. Additional information regarding population trends and threats may be found in NMFS' Stock Assessment Reports (SARs; <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>) and more general information about these species (*e.g.*, physical and behavioral descriptions) may be found on NMFS' website (<https://www.fisheries.noaa.gov/find-species>).

Table 1 lists all species or stocks for which take is expected and proposed to be authorized for this activity and summarizes information related to the population or stock, including regulatory status under the MMPA and (ESA) and potential biological removal (PBR), where known. PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no serious injury or mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species or stocks and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' U.S. Atlantic and Gulf of Mexico SARs. All values presented in table 1 are the most recent available at the time of publication, including, as applicable, from the draft 2023 SARs (available online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>).

TABLE 1—SPECIES LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES¹

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) ²	Stock abundance (CV, N _{min} , most recent abundance survey) ³	PBR	Annual M/SI ⁴
Order Cetartiodactyla—Cetacea—Superfamily Mysticeti (baleen whales)						
N Atlantic Right Whale	<i>Eubalaena glacialis</i>	Western Atlantic	E, D, Y	340 (0, 337, 2021) ⁵	0.7	27.2
Humpback Whale	<i>Megaptera novaeangliae</i>	Gulf of Maine	- , - , N	1,396 (0, 1380, 2016)	22	12.15
Fin Whale	<i>Balaenoptera physalus</i>	Western North Atlantic	E, D, Y	6,802 (0.24, 5,573, 2021)	11	2.05
Sei Whale	<i>Balaenoptera borealis</i>	Nova Scotia	E, D, Y	6,292 (1.02, 3,098, 2021)	6.2	0.6
Minke Whale	<i>Balaenoptera acutorostrata</i>	Canadian Eastern Coastal	- , - , N	21,968 (0.31, 17,002, 2021) ..	170	9.4
Order Cetartiodactyla—Cetacea—Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Sperm Whale	<i>Physeter macrocephalus</i>	North Atlantic	E, D, Y	5,895 (0.29, 4,639, 2021)	9.28	0.2
Long-Finned Pilot Whale ⁶	<i>Globicephala melas</i>	Western North Atlantic	- , - , N	39,215 (0.30, 30,627, 2021) ..	306	5.7
Striped Dolphin	<i>Stenella coeruleoalba</i>	Western North Atlantic	- , - , N	48,274 (0.29, 38,040, 2021) ..	529	0
Atlantic White-Sided Dolphin ..	<i>Lagenorhynchus acutus</i>	Western North Atlantic	- , - , N	93,233 (0.71, 54,443, 2021) ..	544	28
Bottlenose Dolphin	<i>Tursiops truncatus</i>	Western North Atlantic Off- shore.	- , - , N	64,587 (0.24, 52,801, 2021) ⁷ ..	507	28
Common Dolphin	<i>Delphinus delphis</i>	Western North Atlantic	- , - , N	93,100 (0.56, 59,897, 2021) ..	1,452	414
Atlantic Spotted Dolphin	<i>Stenella frontalis</i>	Western North Atlantic	- , - , N	31,506 (0.28, 25,042, 2021) ..	250	0
Risso's Dolphin	<i>Grampus griseus</i>	Western North Atlantic	- , - , N	44,067 (0.19, 30,662, 2021) ..	307	18
White-Beaked Dolphin	<i>Lagenorhynchus albirostris</i>	Western North Atlantic	- , - , N	536,016 (0.31, 415,344, 2016)	4,153	0
Harbor Porpoise	<i>Phocoena phocoena</i>	Gulf of Maine/Bay of Fundy ...	- , - , N	85,765 (0.53, 56,420, 2021) ..	649	145
Order Carnivora—Superfamily Pinnipedia						
Harbor Seal	<i>Phoca vitulina</i>	Western North Atlantic	- , - , N	61,336 (0.08, 57,637, 2018) ..	1,729	339
Gray Seal ⁸	<i>Halichoerus grypus</i>	Western North Atlantic	- , - , N	27,911 (0.20, 23,624, 2021) ..	1,512	4,570

¹ Information on the classification of marine mammal species can be found on the web page for The Society for Marine Mammalogy's Committee on Taxonomy (<https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies>).

² ESA status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

³ NMFS marine mammal stock assessment reports online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region>. CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance.

⁴ These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (e.g., commercial fisheries, ship strike). Annual mortality and serious injury (M/SI) often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

⁵ The current SAR includes an estimated population (N_{best} 340) based on sighting history through December 2021 (NMFS, 2024). In October 2023, NMFS released a technical report identifying that the NARW population size based on sighting history through 2022 was 356 whales, with a 95 percent credible interval ranging from 346 to 363 (Linden, 2023). Total annual average observed NARW mortality during the period 2017–2021 was 7.1 animals and annual average observed fishery mortality was 4.6 animals. Numbers presented in this table (27.2 total mortality and 17.6 fishery mortality) are 2016–2020 estimated annual means, accounting for undetected mortality and serious injury.

⁶ Key uncertainties exist in the population size estimate for this species, including uncertain separation between short-finned and long-finned pilot whales, small negative bias due to lack of abundance estimate in the region between US and the Newfoundland/Labrador survey area, and uncertainty due to unknown precision and accuracy of the availability bias correction factor that was applied.

⁷ Estimates may include sightings of the coastal form.

⁸ NMFS' stock abundance estimate (and associated PBR value) applies to the U.S. population only. Total stock abundance (including animals in Canada) is approximately 394,311. The annual M/SI value given is for the total stock.

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Not all marine mammal species have equal hearing capabilities (e.g., Richardson *et al.* 1995; Wartzok and Ketten, 1999; Au and Hastings,

2008). To reflect this, Southall *et al.* (2007, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc.*). Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.*, low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for

these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65-decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in table 2.

TABLE 2—MARINE MAMMAL HEARING GROUPS
[NMFS, 2018]

Hearing group	Generalized hearing range *
Low-frequency (LF) cetaceans(baleen whales)	7 Hz to 35 kHz.
Mid-frequency (MF) cetaceans(dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
High-frequency (HF) cetaceans(true porpoises, <i>Kogia</i> , river dolphins, <i>Cephalorhynchid</i> , <i>Lagenorhynchus cruciger</i> & <i>L. australis</i>).	275 Hz to 160 kHz.

TABLE 2—MARINE MAMMAL HEARING GROUPS—Continued
[NMFS, 2018]

Hearing group	Generalized hearing range *
Phocid pinnipeds (PW) (underwater)(true seals)	50 Hz to 86 kHz.
Otariid pinnipeds (OW) (underwater)(sea lions and fur seals)	60 Hz to 39 kHz.

* Represents the generalized hearing range for the entire group as a composite (*i.e.*, all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65-dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall *et al.* 2007) and PW pinniped (approximation).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

A description of the potential effects of the specified activity on marine mammals and their habitat for the activities for which take is proposed here may be found in the **Federal Register** notice of the proposed IHA for the initial authorization proposed (87 FR 52515, August 26, 2022). At present, there is no new information on potential effects that would change our analysis.

Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes authorized through the IHA, which will inform NMFS' consideration of "small numbers," the negligible impact determinations, and impacts on subsistence uses.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines "harassment" as any act of pursuit, torment, or annoyance, which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes will be by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to certain HRG sources. Based on the nature of the activity and the anticipated effectiveness of the mitigation measures (*i.e.*, shutdown measures, vessel strike avoidance procedures) discussed in detail below in the Mitigation section, Level A harassment is neither anticipated nor authorized.

As described previously, no serious injury or mortality is anticipated or authorized for this activity. Below we describe how the take numbers are estimated.

For acoustic impacts, generally speaking, we estimate take by considering: (1) acoustic thresholds above which NMFS believes the best available science indicates marine mammals will likely be behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) the number of days of activities. We note that while these factors can contribute to a basic calculation to provide an initial prediction of potential takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.*, previous monitoring results or average group size). Below, we describe the factors considered here in more detail and present the take estimates.

Acoustic Thresholds

NMFS recommends the use of acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur permanent threshold shift (PTS) of some degree (equated to Level A harassment).

Level B Harassment—Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source or exposure context (*e.g.*, frequency, predictability, duty cycle, duration of the exposure, signal-to-noise ratio, distance to the source), the environment (*e.g.*, bathymetry, other noises in the area, predators in the area), and the receiving animals (hearing, motivation, experience, demography, life stage, depth) and can be difficult to predict (*e.g.*, Southall *et al.* 2007, 2021; Ellison *et al.* 2012). Based on what the available

science indicates and the practical need to use a threshold based on a metric that is both predictable and measurable for most activities, NMFS typically uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS generally predicts that marine mammals are likely to be behaviorally harassed in a manner considered to be Level B harassment when exposed to underwater anthropogenic noise above root-mean-squared pressure received levels (RMS SPL) of 120 dB (referenced to 1 micropascal (re 1 μ Pa)) for continuous (*e.g.*, vibratory pile driving, drilling) and above RMS SPL 160 dB re 1 μ Pa for non-explosive impulsive (*e.g.*, seismic airguns) or intermittent (*e.g.*, scientific sonar) sources. Generally speaking, Level B harassment take estimates based on these behavioral harassment thresholds are expected to include any likely takes by temporary threshold shift (TTS) as, in most cases, the likelihood of TTS occurs at distances from the source less than those at which behavioral harassment is likely. TTS of a sufficient degree can manifest as behavioral harassment, as reduced hearing sensitivity and the potential reduced opportunities to detect important signals (conspecific communication, predators, prey) may result in changes in behavior patterns that would not otherwise occur.

Bay State Wind's activity includes the use of impulsive (*i.e.*, boomers and sparkers) and non-impulsive (*i.e.*, CHIRP SBPs) sources, and therefore the RMS SPL thresholds of 160 dB re 1 μ Pa is applicable.

Level A harassment—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0; Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive).

These thresholds are provided in the table below. The references, analysis,

and methodology used in the development of the thresholds are described in NMFS' 2018 Technical Guidance, which may be accessed at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance>.

On May 3, 2024, NMFS published (89 FR 36762) and solicited public comment on its draft Updated Technical Guidance, which includes updated thresholds and weighting functions to inform auditory injury estimates, and is intended to replace the 2018 Technical

Guidance referenced above, once finalized. The public comment period ended on June 17, 2024, and although the Updated Technical Guidance is not final, we expect the Updated Technical Guidance to represent the best available science once it is.

Bay State Wind's HRG surveys include the use of impulsive (*i.e.*, boomers and sparkers) and non-impulsive (*i.e.*, CHIRP SBPs). However, as discussed above, NMFS has concluded that Level A harassment is not a reasonably likely outcome for marine mammals exposed to noise from

the sources for use here, and the potential for Level A harassment is not evaluated further in this document. The pending update to the Technical Guidance would not change NMFS' determination regarding the likelihood of take by Level A harassment. Please see Bay State Wind's application (section 1.4) for details of a quantitative exposure analysis exercise, (*i.e.*, calculated Level A harassment isopleths and estimated Level A harassment exposures). No take by Level A harassment is anticipated or authorized by NMFS.

TABLE 3—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

Hearing group	PTS onset acoustic thresholds* (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	Cell 1: $L_{pk,flat}$: 219 dB; $L_E,LF,24h$: 183 dB	Cell 2: $L_E,LF,24h$: 199 dB.
Mid-Frequency (MF) Cetaceans	Cell 3: $L_{pk,flat}$: 230 dB; $L_E,MF,24h$: 185 dB	Cell 4: $L_E,MF,24h$: 198 dB.
High-Frequency (HF) Cetaceans	Cell 5: $L_{pk,flat}$: 202 dB; $L_E,HF,24h$: 155 dB	Cell 6: $L_E,HF,24h$: 173 dB.
Phocid Pinnipeds (PW) (Underwater)	Cell 7: $L_{pk,flat}$: 218 dB; $L_E,PW,24h$: 185 dB	Cell 8: $L_E,PW,24h$: 201 dB.
Otariid Pinnipeds (OW) (Underwater)	Cell 9: $L_{pk,flat}$: 232 dB; $L_E,OW,24h$: 203 dB	Cell 10: $L_E,OW,24h$: 219 dB.

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 μ Pa, and cumulative sound exposure level (L_E) has a reference value of 1 μ Pa²s. In this table, thresholds are abbreviated to reflect American National Standards Institute (ANSI) standards (American National Standards Institute, 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript "flat" is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds could be exceeded in a multitude of ways (*i.e.*, varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these acoustic thresholds will be exceeded.

Ensonified Area

Here, we describe operational and environmental parameters of the activity that are used in estimating the area ensonified above the acoustic thresholds, including source levels and transmission loss coefficient.

NMFS has developed a user-friendly methodology for determining the rms sound pressure level at the 160-dB isopleth for the purpose of estimating the extent of Level B harassment isopleths associated with HRG survey equipment (NMFS, 2020). This methodology incorporates frequency and some directionality to refine estimated ensonified zones. Bay State Wind used NMFS's methodology, using the source level and operation mode of the equipment planned for use during the survey, to estimate the maximum ensonified area over a 24-hour period, also referred to as the harassment area (table 4). Potential takes by Level B harassment are estimated within the ensonified area (*i.e.*, harassment area) as an SPL exceeding 160 dB re 1 μ Pa for impulsive sources (*e.g.*, sparkers, boomers) within an average day of activity.

The harassment zone is a representation of the maximum extent of the ensonified area around a sound source over a 24-hour period. The harassment zone was calculated for mobile sound sources per the following formula:

$$\text{Harassment Zone} = (\text{Distance}/\text{day} \times 2r) + \pi r^2$$

where r is the linear distance from the source to the isopleth for Level A or Level B thresholds and day = 1 (*i.e.*, 24 hours).

The estimated potential daily active survey distance of 70 km was used as the estimated areal coverage over a 24-hour period. This distance accounts for the vessel traveling at roughly 4 knots (kn) (2.1 m/second) and only for periods during which survey equipment that may result in take of marine mammals is in operation. A vessel traveling 4 kn (2.1 m/second) can cover approximately 110 km per day; however, based on data from 2017, 2018, and 2019 surveys, survey coverage over a 24-hour period is closer to 70 km per day. For daylight only vessels, the distance is reduced to 35 km per day; however, to maintain the potential for 24-hour surveys, the

corresponding Level B harassment zones provided in table 4 were calculated for each source category based on the Level B threshold distances in table 3 with a 24-hour (70 km) operational period.

NMFS considers the data provided by Crocker and Fratantonio (2016) to represent the best available information on source levels associated with HRG equipment and, therefore, recommends that source levels provided by Crocker and Fratantonio (2016) be incorporated in the method described above to estimate isopleth distances to harassment thresholds. In cases when the source level for a specific type of HRG equipment is not provided in Crocker and Fratantonio (2016), NMFS recommends that either the source levels provided by the manufacturer be used, or, in instances where source levels provided by the manufacturer are unavailable or unreliable, a proxy from Crocker and Fratantonio (2016) be used instead. Table 2 shows the HRG equipment types that may be used during the surveys and the source levels associated with those HRG equipment types.

Based upon modeling results, of the HRG survey equipment planned for use by Bay State Wind that has the potential to result in Level B harassment of marine mammals, the Applied Acoustics Dura-Spark UHD and GeoMarine Geo-Source sparker would produce the largest Level B harassment

isopleth (141 m) or Harassment Zone. Estimated distances to Level B harassment isopleths for all sources evaluated here, including the sparkers, are provided in table 4. Although Bay State Wind does not expect to use sparker sources on all planned survey days, Bay State Wind assumes for

purposes of analysis that the sparker would be used on all survey days. This is a conservative approach, as the actual sources used on individual survey days may produce smaller harassment distances.

TABLE 4—DISTANCE TO LEVEL B HARASSMENT THRESHOLDS
[160 dB rms]

Source	Distance to Level B harassment threshold (m)
Boomers	76
Sparkers	141

Marine Mammal Occurrence

In this section we provide information about the occurrence of marine mammals, including density or other relevant information which will inform the take calculations.

Habitat based density models produced by the Duke University Marine Geospatial Ecology Laboratory (Roberts *et al.* 2016, 2023) represent the best available information regarding marine mammal densities in the Lease Area and potential ECRs. The density data presented by Roberts *et al.* (2016, 2023) incorporate aerial and shipboard line-transect data from NMFS and other organizations and incorporate data from 8 physiographic and 16 dynamic oceanographic and biological covariates, and control for the influence of sea state, group size, availability bias, and perception bias on the probability of making a sighting. These density models were originally developed for all cetacean taxa in the U.S. Atlantic (Roberts *et al.* 2016). In subsequent years, certain models have been updated based on additional data as well as certain methodological improvements. More information is available online at <https://seamap.env.duke.edu/models/Duke/EC>. Marine mammal density estimates in the Lease Area and potential ECRs (animals/km²) were obtained using the most recent model results for all taxa (Roberts *et al.* 2023). The updated models incorporate sighting data, including sightings from NOAA’s Atlantic Marine Assessment Program for Protected Species (AMAPPS) surveys.

For exposure analysis, density data from Roberts *et al.* (2023) were mapped using a geographic information system (GIS). Density grid cells that included any portion of the Lease Area and potential ECRs were selected for all survey months (see figure 4 of Bay State Wind’s application). The densities for

each species as reported by Roberts *et al.* (2023) for each of the Lease Area and ECR were averaged by month; those values were then used to calculate the mean annual density for each species within the Lease Area and potential ECRs. Estimated mean monthly and annual densities (animals per km²) of all marine mammal species that may be taken by the survey are shown in table 6 of Bay State Wind’s application. Please see table 5 for density values used in the exposure estimation process.

Due to limited data availability and difficulties identifying individuals to species level during visual surveys, individual densities are not able to be provided for all species and they are instead grouped into “guilds” (Roberts *et al.* 2023). These guilds include pilot whales, common bottlenose dolphins, and seals.

Long- and short-finned pilot whales are difficult to distinguish during shipboard surveys so individual habitat models were not able to be developed. However, as discussed in section 4.2.3 of Bay State Wind’s application, all pilot whales in the Lease Area and potential ECRs are assumed to be long-finned pilot whales, so the densities and subsequent takes would apply only to this species.

The density models do not distinguish between common bottlenose dolphin stocks due to limited data regarding distributions of these stocks. As discussed in section 4.2.7 of Bay State Wind’s application, only the western North Atlantic offshore stock is expected to occur in the Lease Area and potential ECRs. Therefore, the densities in table 5 and subsequent take calculations would only apply to this stock of bottlenose dolphins.

Gray seals and harbor seals are reasonably identifiable during shipboard visual surveys; therefore, it is expected that some sightings will be

assigned to species rather than to the generalized seal guild. Additionally, seals tend to occur in very small numbers when away from haul out areas; therefore, sighting events are not likely to constitute large numbers of animals. For these reasons, the seal guild density was split evenly between both gray and harbor seal species.

TABLE 5—AVERAGE ANNUAL MARINE MAMMAL DENSITY ESTIMATES

Species	Average annual density (km ²)
Low-frequency Cetaceans	
Fin whale	0.0022
Sei whale	0.0006
Minke whale	0.0056
Humpback whale	0.0014
North Atlantic right whale	0.0022
Mid-frequency cetaceans	
Sperm whale	0.0002
Atlantic white-sided dolphin ..	0.0143
Atlantic spotted dolphin	0.0006
Common bottlenose dolphin (Offshore)	0.0093
Long-finned pilot whale	0.0016
Risso’s dolphin	0.0006
Common dolphin	0.0846
Striped dolphin	0.0000
White-beaked dolphin	0.0000
High-frequency Cetaceans	
Harbor porpoise	0.0423
Pinnipeds ¹	
Gray seal	0.0845
Harbor seal	0.0845

¹ Seal species are not separated in the Roberts (2022) data therefore densities were evenly split between the two species expected to occur in the Lease Area and potential ECRs.

Take Estimation

Here we describe how the information provided above is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and is authorized.

Level B harassment events were estimated by multiplying the average annual density of each species within the Lease Area and potential ECRs (table

5) by the largest harassment zone (141 m; table 4). That result was then multiplied by the number of survey days in that Lease Area or ECR (350 survey days), and rounded to the nearest whole number to arrive at estimated take. This final number equals the instances of take for the entire operational period. It was assumed the sparker systems were operating all 350

survey days as it is the sound source expected to produce the largest harassment zone. A summary of this method is illustrated in the following formula with the resulting take of marine mammals is shown below in table 6:

$$\text{Estimated take} = \text{Species Density} \times \text{Harassment Zone} \times \# \text{ of survey days}$$

TABLE 6—TOTAL ESTIMATED AND REQUESTED TAKE NUMBERS
[By Level B harassment only]

Species	Abundance	Estimated Level B takes	Requested Level B takes	Max percent population
Low-frequency Cetaceans:				
Fin whale	6,802	15	15	0.22
Sei whale	6,292	4	4	0.06
Minke whale	21,968	39	39	0.18
Humpback whale	1,396	10	10	0.72
North Atlantic right whale	340	15	15	4.41
Mid-frequency Cetaceans:				
Sperm whale	5,895	2	2	0.03
Atlantic white-sided dolphin	93,233	99	99	0.11
Atlantic spotted dolphin	31,506	4	4	0.01
Common bottlenose dolphin (offshore stock)	64,587	65	65	0.10
Long-finned pilot whale	39,215	11	11	0.03
Risso's dolphin	44,067	4	4 (14)	0.03
Common dolphin	93,100	586	586 (1,485)	1.60
Striped dolphin	48,274	0	0 (46)	0.10
White-beaked dolphin	536,016	0	0 (12)	0.00
High-frequency Cetaceans:				
Harbor porpoise	85,765	293	293	0.34
Pinnipeds:				
Seals:				
Gray seal	27,911	586	586	2.10
Harbor seal	61,336	586	586	0.96

Additional data regarding average group sizes from survey effort in the region was considered to ensure adequate take estimates are evaluated. Take estimates for several species were adjusted based upon observed group sizes in the area. The adjusted take estimates for these species are indicated in bold in table 6. These calculated take estimates were adjusted for these species as follows:

- *Striped dolphin*: No takes were calculated for this species (table 6), but data from AMAPPS data indicate this species was observed in the RI-MA Wind Energy Area (WEA) (Palka *et al.* 2017) where this Project Lease Area is located. Therefore, 1 group of 46 was added to the requested takes, based on a sighting of 1 group of 46 from AMAPPS data (Palka *et al.* 2017).

- *Risso's dolphin*: Only 4 takes were calculated but based on two reported detections with a total of 14 individuals of this species in PSO monitoring reports for projects in the RI-MA WEA where this Project Lease Area is located (Bay State Wind, 2019; Smultea

Environmental Sciences, 2020), the take number was increased to 14.

- *Common dolphin*: The Applicant requested to increase their take numbers from 586 to 1,485 based on PSO data where 4,457 individuals were observed in the estimated Level B harassment zone over a total of 1,300 survey days (Smultea Environmental Sciences, 2020). The survey is only 350 survey days which is approximately $\frac{1}{3}$ of the survey days considered in the PSO data, so the number of takes has been recalculated to $\frac{1}{3}$ of the 4,457 detections which equates to 1,485.

- *White-beaked dolphin*: no takes were calculated but based on reported detections of this species in 2 PSO monitoring reports for projects in the RI-MA WEA where this Project Lease Area is located (EPI Group, 2021; RPS, 2021), 1 group of 12 was added to the requested takes.

Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and

other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, NMFS considers two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is

expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

(2) The practicability of the measures for applicant implementation, which may consider such things as cost and impact on operations.

NMFS requires that the following mitigation measures be implemented during Bay State Wind's marine site characterization surveys. Pursuant to section 7 of the ESA, Bay State Wind will also be required to adhere to relevant Project Design Criteria (PDC) of the NMFS' GARFO programmatic consultation (specifically PDCs 4, 5, and 7) regarding geophysical surveys along the U.S. Atlantic coast (<https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-take-reporting-programmatics-greater-atlantic#offshore-wind-site-assessment-and-site-characterization-activities-programmatic-consultation>).

Marine Mammal Shutdown Zones

Marine mammal shutdown zones will be established around impulsive HRG survey equipment (e.g., sparkers and boomers) for all marine mammals. Shutdown zones will be monitored by PSOs based upon the radial distance from the acoustic source rather than being based around the vessel itself. An immediate shutdown of impulsive HRG survey equipment will be required if a whale is sighted at or within the corresponding marine mammal shutdown zones to minimize noise impacts on the animals. If a shutdown is required, a PSO will notify the survey crew immediately. Vessel operators and crews will comply immediately with any call for shutdown. The shutdown zone may or may not encompass the Level B harassment zone. Shutdown zone distances are as follows:

- A 500 m shutdown zone for NARWs for use of impulsive acoustic sources (e.g., boomers and/or sparkers) and non-impulsive, non-parametric sub-bottom profilers; and
- A 100-m shutdown zone for use of impulsive acoustic sources for all other marine mammals, with the exception of small delphinids, i.e., those belonging to the genera *Delphinus*, *Lagenorhynchus*, *Stenella*, or *Tursiops*, and pinnipeds.

Shutdown will remain in effect until the minimum separation distances (detailed above) between the animal and noise source are re-established. If a marine mammal enters the respective shutdown zone during a shutdown period, the equipment may not restart until that animal is confirmed outside the clearance zone as stated previously in the pre-start clearance procedures. These stated requirements will be included in the site-specific training to be provided to the survey team.

Pre-Start Clearance

Marine mammal clearance zones will be established at the following distances around the HRG survey equipment and monitored by PSOs:

- 500 m for NARWs and all other ESA-listed whales;
- 100 m for non-ESA listed large whales; and
- 50 m for dolphins, seals, and porpoises.

Bay State Wind will implement a 30-minute pre-start clearance period prior to the initiation of ramp-up of specified HRG equipment. During this period, clearance zones will be monitored by PSOs, using the appropriate visual technology. Ramp-up may not be initiated if any marine mammal(s) is within its respective clearance zone. If a marine mammal is observed within a clearance zone during the pre-start clearance period, ramp-up may not begin until the animal(s) has been observed exiting its respective exclusion zone or until an additional time period has elapsed with no further sighting (i.e., 15 minutes for small odontocetes and seals, and 30 minutes for all other species). Monitoring will be conducted throughout all pre-clearance and shutdown zones as well as all visible waters surrounding the sound sources and the vessel. All marine mammals detected will be recorded as described in the Monitoring and Reporting section.

Ramp-Up of Survey Equipment

A ramp-up procedure, involving a gradual increase in source level output, is required at all times as part of the activation of the acoustic source when technically feasible. The ramp-up procedure will be used at the beginning of HRG survey activities in order to provide additional protection to marine mammals near the Lease Area and potential ECRs by allowing them to vacate the area prior to the commencement of survey equipment operation at full power. Operators should ramp-up sources to half power for 5 minutes and then proceed to full power.

The ramp-up procedure will not be initiated (i.e., equipment will not be started) during periods of inclement conditions when the marine mammal pre-start clearance zone cannot be adequately monitored by the PSOs for a 30 minute period using the appropriate visual technology. If any marine mammal enters the clearance zone, ramp-up will not be initiated until the animal is confirmed outside the marine mammal clearance zone, or until the appropriate time (30 minutes for whales, 15 minutes for dolphins, porpoises, and seals) has elapsed since the last sighting of the animal in the clearance zone.

Shutdown, pre-start clearance, and ramp-up procedures are not required during HRG survey operations using only non-impulsive sources (e.g., echosounders) other than non-parametric sub-bottom profilers (e.g., CHIRPs).

Vessel Strike Avoidance

Bay State Wind must adhere to the following measures except in the case where compliance would create an imminent and serious threat to a person or vessel or to the extent that a vessel is restricted in its ability to maneuver and, because of the restriction, cannot comply.

- Vessel operators and crews must maintain a vigilant watch for all protected species and slow down, stop their vessel, or alter course, as appropriate and regardless of vessel size, to avoid striking any protected species. A visual observer aboard the vessel must monitor a vessel strike avoidance zone based on the appropriate separation distance around the vessel (distances stated below). Visual observers monitoring the vessel strike avoidance zone may be third-party observers (i.e., PSOs) or crew members, but crew members responsible for these duties must be provided sufficient training to (1) distinguish protected species from other phenomena, and (2) broadly identify a marine mammal as a right whale, other whale (defined in this context as sperm whales or baleen whales other than right whales), or other marine mammal;

a. All survey vessels, regardless of size, must observe a 10-kn (5.1 m/second) speed restriction in specified areas designated by NMFS for the protection of NARWs from vessel strikes including seasonal management areas (SMAs) and dynamic management areas (DMAs) when in effect;

b. Members of the monitoring team will consult NMFS NARW reporting system and Whale Alert, as able, for the presence of NARWs throughout survey

operations, and for the establishment of a DMA. If NMFS should establish a DMA in the Lease Area and potential ECRs during the survey, the vessels will abide by speed restrictions in the DMA;

c. All vessels greater than or equal to 19.8 m in overall length operating from November 1 through April 30 will operate at speeds of 10 kn (5.1 m/second) or less at all times;

d. All vessels must reduce their speed to 10 kn (5.1 m/second) or less when mother/calf pairs, pods, or large assemblages of any species of cetaceans is observed near a vessel;

e. All vessels must maintain a minimum separation distance of 500 m from right whales and other ESA-listed large whales;

f. If a whale is observed but cannot be confirmed as a species other than a right whale or other ESA-listed large whale, the vessel operator must assume that it is a right whale and take appropriate action;

g. All vessels must maintain a minimum separation distance of 100 m from non-ESA listed whales;

- All vessels must, to the maximum extent practicable, attempt to maintain a minimum separation distance of 50 m from all other marine mammals, with an understanding that at times this may not be possible (e.g., for animals that approach the vessel);

- When marine mammals are sighted while a vessel is underway, the vessel shall take action as necessary to avoid violating the relevant separation distance (e.g., attempt to remain parallel to the animal's course, avoid excessive speed or abrupt changes in direction until the animal has left the area). If marine mammals are sighted within the relevant separation distance, the vessel must reduce speed and shift the engine to neutral, not engaging the engines until animals are clear of the area. This does not apply to any vessel towing gear or any vessel that is navigationally constrained.

Project-specific training will be conducted for all vessel crew prior to the start of a survey and during any changes in crew such that all survey personnel are fully aware and understand the mitigation, monitoring, and reporting requirements.

Based on our evaluation of the applicant's measures, NMFS has determined that the mitigation measures provide the means of effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104(a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present while conducting the activities. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (e.g., presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (e.g., source characterization, propagation, ambient noise); (2) affected species (e.g., life history, dive patterns); (3) co-occurrence of marine mammal species with the activity; or (4) biological or behavioral context of exposure (e.g., age, calving or feeding areas);
- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;
- Effects on marine mammal habitat (e.g., marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and
- Mitigation and monitoring effectiveness.

Monitoring Measures

Visual monitoring will be performed by qualified, NMFS-approved PSOs, the resumes of whom will be provided to NMFS for review and approval prior to the start of survey activities. Bay State Wind would employ independent,

dedicated, trained PSOs, meaning that the PSOs must (1) be employed by a third-party observer provider, (2) have no tasks other than to conduct observational effort, collect data, and communicate with and instruct relevant vessel crew with regard to the presence of marine mammals and mitigation requirements (including brief alerts regarding maritime hazards), and (3) have successfully completed an approved PSO training course appropriate for their designated task. On a case-by-case basis, non-independent observers may be approved by NMFS for limited, specified duties in support of approved, independent PSOs on smaller vessels with limited crew operating in nearshore waters.

The PSOs will be responsible for monitoring the waters surrounding each survey vessel to the farthest extent permitted by sighting conditions, including shutdown and pre-clearance zones, during all HRG survey operations. PSOs will visually monitor and identify marine mammals, including those approaching or entering the established shutdown and pre-clearance zones during survey activities. It will be the responsibility of the Lead PSO on duty to communicate the presence of marine mammals as well as to communicate the action(s) that are necessary to ensure mitigation and monitoring requirements are implemented as appropriate.

During all HRG survey operations (e.g., any day on which use of an HRG source is planned to occur), a minimum of one PSO must be on duty during daylight operations on each survey vessel, conducting visual observations at all times on all active survey vessels during daylight hours (i.e., from 30 minutes prior to sunrise through 30 minutes following sunset). Two PSOs will be on watch during nighttime operations. The PSO(s) will ensure 360-degree visual coverage around the vessel from the most appropriate observation posts and would conduct visual observations using binoculars and/or night vision goggles and the naked eye while free from distractions and in a consistent, systematic, and diligent manner. PSOs may be on watch for a maximum of four consecutive hours followed by a break of at least one hour between watches and may conduct a maximum of 12 hours of observations per 24-hour period. In cases where multiple vessels are surveying concurrently, any observations of marine mammals would be communicated to PSOs on all nearby survey vessels.

PSOs must be equipped with binoculars and have the ability to

estimate distance and bearing to detect marine mammals, particularly in proximity to exclusion zones. Reticulated binoculars must also be available to PSOs for use as appropriate based on conditions and visibility to support the sighting and monitoring of marine mammals. During nighttime operations, night-vision goggles with thermal clip-ons and infrared technology would be used. Position data would be recorded using hand-held or vessel GPS units for each sighting.

During good conditions (e.g., daylight hours; Beaufort sea state (BSS) 3 or less), to the maximum extent practicable, PSOs would also conduct observations when the acoustic source is not operating for comparison of sighting rates and behavior with and without use of the active acoustic sources. Any observations of marine mammals by crew members aboard any vessel associated with the survey would be relayed to the PSO team. Data on all PSO observations would be recorded based on standard PSO collection requirements. This would include dates, times, and locations of survey operations; dates and times of observations, location and weather, details of marine mammal sightings (e.g., species, numbers, behaviors); and details of any observed marine mammal behavior that occurs (e.g., notes behavioral disturbances). For more detail on the monitoring requirements, see condition 5 of the draft IHA.

Reporting Measures

Within 90 days after completion of survey activities or expiration of this IHA, whichever comes sooner, a draft comprehensive report will be provided to NMFS that fully documents the methods and monitoring protocols, summarizes the data recorded during monitoring, summarizes the number of marine mammals observed during survey activities (by species, when known), summarizes the mitigation actions taken during surveys including what type of mitigation and the species and number of animals that prompted the mitigation action, when known), and provides an interpretation of the results and effectiveness of all mitigation and monitoring. Any recommendations made by NMFS must be addressed in the final report prior to acceptance by NMFS. A final report must be submitted within 30 days following any comments on the draft report. All draft and final marine mammal and acoustic monitoring reports must be submitted to PR.ITP.MonitoringReports@noaa.gov and ITP.Hilt@noaa.gov. The report must contain at minimum, the following:

- PSO names and affiliations:
 - a. Dates of departures and returns to port with port names;
 - b. Dates and times (Greenwich Mean Time) of survey effort and times corresponding with PSO effort;
 - c. Vessel location (latitude/longitude) when survey effort begins and ends; vessel location at beginning and end of visual PSO duty shifts;
 - d. Vessel heading and speed at beginning and end of visual PSO duty shifts and upon any line change; and
 - e. Environmental conditions while on visual survey (at beginning and end of PSO shift and whenever conditions change significantly), including wind speed and direction, BSS, Beaufort wind force, swell height, weather conditions, cloud cover, sun glare, and overall visibility to the horizon;
 - Factors that may be contributing to impaired observations during each PSO shift change or as needed as environmental conditions change (e.g., vessel traffic, equipment malfunctions);
 - Survey activity information, such as type of survey equipment in operation, acoustic source power output while in operation, and any other notes of significance (i.e., pre-clearance survey, ramp-up, shutdown, end of operations, etc.);
 - Survey activity information (and changes thereof), including at minimum the general specifications of all acoustic sources, power output of all sparkers and boomers while in operation, number of operational sparker tips for all sparkers, tow depth(s) of all towed acoustic sources, and any other notes of significance (i.e., pre-start clearance, ramp-up, shutdown, testing, shooting, ramp-up completion, end of operations, streamers, etc.);
 - If a marine mammal is sighted, the following information should be recorded:
 - a. Watch status (sighting made by PSO on/off effort, opportunistic, crew, alternate vessel/platform);
 - b. PSO who sighted the animal;
 - c. Time of sighting;
 - d. Vessel location at time of sighting;
 - e. Water depth;
 - f. Direction of vessel's travel (compass direction);
 - g. Direction of animal's travel relative to the vessel;
 - h. Pace of the animal; and
 - i. Estimated distance to the animal and its heading relative to vessel at initial sighting;
 - Identification of the animal (e.g., genus/species, lowest possible taxonomic level, or unidentified); also note the composition of the group if there is a mix of species;
 - a. Estimated number of animals (high/low/best);

- b. Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.); and
- c. Description (as many distinguishing features as possible of each individual seen, including length, shape, color, pattern, scars or markings, shape and size of dorsal fin, shape of head, and blow characteristics);

- Detailed behavior observations (e.g., number of blows, number of surfaces, breaching, spyhopping, diving, feeding, traveling; as explicit and detailed as possible; note any observed changes in behavior);

- Animal's closest point of approach and/or closest distance from the center point of the acoustic source;

- Platform activity at time of sighting (e.g., deploying, recovering, testing, data acquisition, other); and

- Description of any actions implemented in response to the sighting (e.g., delays, shutdown, ramp-up, speed or course alteration, etc.) and time and location of the action.

If a NARW is observed at any time by PSOs or personnel on any project vessels, during surveys or during vessel transit, Bay State Wind must immediately report sighting information to the NMFS North Atlantic Right Whale Sighting Advisory System: (866) 755-6622. NARW sightings in any location may also be reported to the U.S. Coast Guard via channel 16.

In the event that Bay State Wind personnel discover an injured or dead marine mammal, Bay State Wind will report the incident to the NMFS Office of Protected Resources (OPR) and the NMFS New England/Mid-Atlantic Stranding Coordinator as soon as feasible. The report would include the following information:

- a. Species identification (if known) or description of the animal(s) involved;
- b. Condition of the animal(s) (including carcass condition if the animal is dead);
- c. Observed behaviors of the animal(s), if alive;
- d. If available, photographs or video footage of the animal(s); and
- e. General circumstances under which the animal was discovered;
- f. Time;
- g. Date; and
- h. location (latitude/longitude) of the first discovery (and updated location information if known and applicable).

In the unanticipated event of a ship strike of a marine mammal by any vessel involved in this activities covered by the IHA, Bay State Wind will report the incident to NMFS OPR and the NMFS New England/Mid-Atlantic Stranding Coordinator as soon as feasible. The report would include the following information:

- a. Time, date, and location (latitude/longitude) of the incident;
- b. Species identification (if known) or description of the animal(s) involved;
- c. Vessel's speed during and leading up to the incident;
- d. Vessel's course/heading and what operations were being conducted (if applicable);
- e. Status of all sound sources in use;
- f. Description of avoidance measures/requirements that were in place at the time of the strike and what additional measures were taken, if any, to avoid strike;
- g. Environmental conditions (*e.g.*, wind speed and direction, BSS, cloud cover, visibility) immediately preceding the strike;
- h. Estimated size and length of animal that was struck;
- i. Description of the behavior of the marine mammal immediately preceding and following the strike;
- j. If available, description of the presence and behavior of any other marine mammals immediately preceding the strike;
- k. Estimated fate of the animal (*e.g.*, dead, injured but alive, injured and moving, blood or tissue observed in the water, status unknown, disappeared); and
- l. To the extent practicable, photographs or video footage of the animal(s).

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through harassment, NMFS considers other factors, such as the likely nature of any impacts or responses (*e.g.*, intensity, duration), the context of any impacts or responses (*e.g.*, critical reproductive time or location, foraging impacts affecting energetics), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989

preamble for NMFS' implementing regulations (54 FR 40338, September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the baseline (*e.g.*, as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, the discussion of our analysis applies to all the species listed in table 1, given that the anticipated effects of this activity on these different marine mammal stocks are expected to be similar. Where there are meaningful differences between species or stocks—as is the case with the NARW—they are included as separate subsections below. NMFS does not anticipate that serious injury or mortality would occur as a result from HRG surveys, even in the absence of mitigation, and no serious injury or mortality is authorized. As discussed in the Potential Effects of Specified Activities on Marine Mammals and their Habitat section, non-auditory physical effects and vessel strike are not expected to occur. NMFS expects that all potential takes would be in the form of Level B harassment in the form of temporary avoidance of the area or decreased foraging (if such activity was occurring), reactions that are considered to be of low severity and with no lasting biological consequences (*e.g.*, Southall *et al.* 2007, 2021). As described above, Level A harassment is not expected to occur given the nature of the operations and the estimated small size of the Level A harassment zones.

In addition to being temporary, the maximum expected harassment zone around the survey vessel is 141 m. Therefore, the ensounded area surrounding each vessel is relatively small compared to the overall distribution of the animals in the area and their use of the habitat. Feeding behavior is not likely to be significantly impacted as prey species are mobile and are broadly distributed throughout the Lease Area and potential ECRs; therefore, marine mammals that may be temporarily displaced during survey activities are expected to be able to resume foraging once they have moved away from areas with disturbing levels of underwater noise. Because of the temporary nature of the disturbance and the availability of similar habitat and resources in the surrounding area, the impacts to marine mammals and the food sources that they utilize are not expected to cause significant or long-term consequences for individual marine mammals or their populations.

There are no rookeries, mating or calving grounds known to be biologically important to marine mammals within the Lease Area and potential ECRs. Two harbor and gray seal breeding and pupping grounds have been identified on Nantucket Sound at Monomoy and Muskeget Island. As the acoustic footprint of the HRG activities is relatively small and these areas occur outside the Lease Area and potential ECRs, hauled seals are not expected to be impacted by these activities.

North Atlantic Right Whale

The status of the NARW population is of heightened concern and therefore, merits additional analysis. As noted previously, elevated NARW mortalities began in June 2017 and there is an active UME. Overall, preliminary findings support human interactions, specifically vessel strikes and entanglements, as the cause of death for the majority of right whales. The Lease Area and potential ECRs overlaps with a migratory corridor biologically important area (BIA) for NARWs (effective March–April; November–December) that extends from Massachusetts to Florida and, off the coast of NY and RI, from the coast to beyond the shelf break (LaBrecque *et al.* 2015). Right whale migration is not expected to be impacted by the survey due to the very small size of the Lease Area and potential ECRs relative to the spatial extent of the available migratory habitat in the BIA. The Lease Area and potential ECRs also overlap with the Block Island SMA, active from November 1 to April 30. NARWs may be feeding or migrating within the SMA. Required vessel strike avoidance measures and following the speed restrictions of the SMA will decrease the risk of ship strike during NARW migration; no ship strike is expected to occur during Bay State Wind's activities. For reasons as described above, minimal impacts are expected to prey availability and feeding success. Additionally, HRG survey operations are required to maintain a 500 m distance and shut down if a NARW is sighted at or within 500 m. The 500-m shutdown zone for right whales is conservative, considering the Level B harassment isopleth for the most impactful sources (*i.e.*, GeoMarine Sparkers, AA Dura-spark UHD Sparkers, AA Triple plate S-Boom) is estimated to be 141 m, and thereby minimizes the potential for behavioral harassment of this species. Therefore only very limited take by Level B harassment of NARW has been requested and is authorized by NMFS. As noted previously, Level A harassment is not expected, nor

authorized, due to the small PTS zones associated with HRG equipment types for use. NMFS does not anticipate NARW takes that result from the survey activities would impact annual rates of recruitment or survival. Thus, any takes that occur would not result in population level impacts.

On August 1, 2022, NMFS announced proposed changes to the existing NARW vessel speed regulations to further reduce the likelihood of mortalities and serious injuries to endangered right whales from vessel collisions, which are a leading cause of the species' decline and a primary factor in an ongoing UME (87 FR 46921, September 9, 2022). Should a final vessel speed rule be issued and become effective during the effective period of this IHA (or any other MMPA incidental take authorization), the authorization holder would be required to comply with any and all applicable requirements contained within the final rule. Specifically, where measures in any final vessel speed rule are more protective or restrictive than those in this or any other MMPA authorization, authorization holders would be required to comply with the requirements of the rule. Alternatively, where measures in this or any other MMPA authorization are more restrictive or protective than those in any final vessel speed rule, the measures in the MMPA authorization would remain in place. These changes would become effective immediately upon the effective date of any final vessel speed rule and would not require any further action on NMFS's part. More information about the NARW UME is provided in the **Federal Register** notice for the proposed IHA (89 FR 67597, August 21, 2024) and is available online at <https://www.fisheries.noaa.gov/national/marine-life-distress/active-and-closed-unusual-mortality-events>.

Other Marine Mammals With Active UMEs

As noted previously, there are several active UMEs occurring in the vicinity of Bay State Wind's Lease Area and potential ECRs. Elevated humpback whale mortalities have occurred along the Atlantic coast from Maine through Florida since January 2016. As of July 16, 2024, 227 humpback whales have stranded as part of this UME. Partial or full necropsy examinations have been conducted on approximately 90 of the known cases. Of the whales examined, about 40 percent had evidence of human interaction, either ship strike or entanglement. While a portion of the whales have shown evidence of pre-mortem vessel strike, this finding is not consistent across all whales examined

and more research is needed. The UME does not yet provide cause for concern regarding population-level impacts. Despite the UME, the relevant population of humpback whales (the West Indies breeding population, or distinct population segment) remains stable at approximately 12,000 individuals. More information about the humpback whale UME is provided in the **Federal Register** notice for the proposed IHA (89 FR 67597, August 21, 2024) and is available online at <https://www.fisheries.noaa.gov/national/marine-life-distress/active-and-closed-unusual-mortality-events>.

Beginning in January 2017, elevated minke whale strandings have occurred along the Atlantic coast from Maine through South Carolina, with highest numbers in Massachusetts, Maine, and New York. As of August 7, 2024, 174 minke whales have stranded as part of this UME. Partial or full necropsy examinations have been conducted on approximately 60% of the whales. Several of the whales showed evidence of human interactions or infectious diseases. This finding is not consistent across all whales examined and more research is needed. This event does not provide cause for concern regarding population level impacts, as the likely population abundance is greater than 20,000 whales. More information about the minke whale UME is available online at <https://www.fisheries.noaa.gov/national/marine-life-distress/active-and-closed-unusual-mortality-events>.

The required mitigation measures are expected to reduce the number and/or severity of takes for all species listed in table 1, including those with active UMEs, to the level of least practicable adverse impact. In particular, they would provide animals the opportunity to move away from the sound source before HRG survey equipment reaches full energy, thus preventing them from being exposed to more severe Level B harassment. No Level A harassment is anticipated, even in the absence of mitigation measures, or authorized.

NMFS expects that takes would be in the form of short-term Level B behavioral harassment by way of brief startling reactions and/or temporary vacating of the area, or decreased foraging in the area (if such activity was occurring)—reactions that (at the scale and intensity anticipated here) are considered to be of low severity, with no lasting biological consequences. Since both the sources and marine mammals are mobile, animals would only be exposed briefly to a small ensonified area that might result in take. Required mitigation measures, such as

shutdown zones and ramp up, would further reduce exposure to sound that could result in more severe behavioral harassment.

In summary and as described above, the following factors primarily support our determination that the impacts resulting from this activity are not expected to adversely affect any of the species or stocks through effects on annual rates of recruitment or survival:

- No serious injury or mortality is anticipated or authorized;
- No Level A harassment (PTS) is anticipated, even in the absence of mitigation measures or authorized;
- Foraging success is not likely to be significantly impacted as effects on species that serve as prey species for marine mammals from the survey are expected to be minimal;
- The availability of alternate areas of similar habitat value for marine mammals to temporarily vacate the ensonified area during the planned surveys to avoid exposure to sounds from the activity;
- Take is anticipated to be of Level B behavioral harassment only consisting of brief startling reactions and/or temporary avoidance of the ensonified area;
- While the Lease Area and potential ECRs is within areas noted as a migratory BIA and SMA for NARW, the activities would occur in such a comparatively small area such that any avoidance of the ensonified area due to activities would not affect migration. In addition, mitigation measures require shutdown at 500 m (almost four times the size of the Level B harassment isopleth (141 m), which minimizes the effects of the take on the species; and
- The mitigation measures, including visual monitoring and shutdowns, are expected to minimize potential impacts to marine mammals.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the monitoring and mitigation measures, NMFS finds that the total marine mammal take from the activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted previously, only take of small numbers of marine mammals will be authorized under sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number

of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. When the predicted number of individuals to be taken is fewer than one-third of the species or stock abundance, the take is considered to be of small numbers. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

The amount of take NMFS has authorized is below one-third of the estimated stock abundance for all species (in fact, take of individuals is less than 5 percent of the abundance of the affected stocks for these species, see table 6). The figures presented in table 6 are likely conservative estimates as they assume all takes are of different individual animals which is likely not to be the case. Some individuals may return multiple times in a day, but PSOs would count them as separate takes if they cannot be individually identified.

Based on the analysis contained herein of the activity (including the mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks will not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act

Section 7(a)(2) of the ESA of 1973 (16 U.S.C. 1531 *et seq.*) requires that each

Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS OPR consults internally whenever we propose to authorize take for endangered or threatened species.

NMFS OPR proposed to authorize the incidental take of four species of marine mammals which are listed under the ESA, including the North Atlantic right, fin, sei, and sperm whale, and has determined that these activities fall within the scope of activities analyzed in GARFO's programmatic consultation regarding geophysical surveys along the U.S. Atlantic coast in the three Atlantic Renewable Energy Regions (completed June 29, 2021; revised September 2021).

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our action (*i.e.*, the issuance of an IHA) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NAO 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has determined that the issuance of the IHA qualifies to be categorically excluded from further NEPA review.

Authorization

NMFS has issued an IHA to Bay State Wind for the potential harassment of

small numbers of 17 marine mammal species incidental to conducting site characterization surveys off the coast of Rhode Island and Massachusetts that includes the previously explained mitigation, monitoring and reporting requirements.

Dated: October 3, 2024.

Kimberly Damon-Randall,

*Director, Office of Protected Resources,
National Marine Fisheries Service.*

[FR Doc. 2024-23259 Filed 10-7-24; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 23-45]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense (DoD).

ACTION: Arms sales notice.

SUMMARY: The DoD is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT:

Pamela Young at (703) 953-6092, pamela.a.young14.civ@mail.mil, or dsca.ncr.rsrcmgmt.list.cns-mbx@mail.mil.

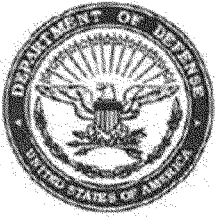
SUPPLEMENTARY INFORMATION: This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives with attached Transmittal 23-45, Policy Justification, and Sensitivity of Technology.

Dated: October 2, 2024.

Aaron T. Siegel,

*Alternate OSD Federal Register Liaison
Officer, Department of Defense.*

BILLING CODE 6001-FR-P



DEFENSE SECURITY COOPERATION AGENCY
 2800 Defense Pentagon
 Washington, DC 20301-2800

June 16, 2023

The Honorable Kevin McCarthy
 Speaker of the House
 U.S. House of Representatives
 H-209, The Capitol
 Washington, DC 20515

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 23-45, concerning the Air Force's proposed Letter(s) of Offer and Acceptance to the Government of the Netherlands for defense articles and services estimated to cost \$611 million. We will issue a news release to notify the public of this proposed sale upon delivery of this letter to your office.

Sincerely,

James A. Hursch
 Director

Enclosures:

1. Transmittal
2. Policy Justification
3. Sensitivity of Technology

BILLING CODE 6001-FR-C

Transmittal No. 23-45

Notice of Proposed Issuance of Letter of Offer Pursuant to Section 36(b)(1) of the Arms Export Control Act, as amended

(i) *Prospective Purchaser:* Government of The Netherlands

(ii) *Total Estimated Value:*

Major Defense Equipment *	\$173 million
Other	\$438 million
TOTAL	611 million

(iii) *Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:*
Major Defense Equipment (MDE):
 Up to four (4) MQ-9A Block 5 Aircraft
 Up to three (3) Unmanned Aircraft Systems (UAS) MQ-9 Mobile Ground Control Systems (MGCS)
 Up to thirty (30) Embedded Global Positioning System/Internal Navigation System (EGI) Devices, Airborne, with Selective Availability Anti-Spoofing Module (SAASM) or M-Code

Up to eight (8) AN/DAS-4 Multi-Spectral Targeting Systems
 Up to twenty (20) Lynx AN/APY-8 Synthetic Aperture Radars
Non-MDE:
 Also included are Reaper engines; Selex Seaspray Synthetic Aperture Radars; SeaVue maritime radars; M299 Hellfire Longbow missile launchers; AN/ARC-210 radios; Line-of-Site (LOS) Ground Data Terminals; Ruggedized Aircraft Maintenance Test Stations (RAMTS); AN/APX-119 and other

Identification Friend or Foe transponders; KIV-77 Cryptographic Appliques; KY-100M narrowband/wideband terminals; AN/PYQ-10 Simple Key Loaders; Satellite Communications (SATCOM) Earth Terminal Subsystems (SETSS); spare parts, consumables, accessories, and repair and return support; secure communication equipment and cryptographic devices; major/minor modifications, maintenance, and maintenance support; munitions support and support equipment; unclassified software delivery and support; transportation support; unclassified publications and technical documentation; studies and surveys; U.S. Government and contractor engineering, technical, and logistics support services; and other related elements of logistical and program support.

(iv) *Military Department: Air Force* (NE-D-SAA)

(v) *Prior Related Cases, if any: NE-D-SMQ*

(vi) *Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None known at this time*

(vii) *Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: See Attached Annex*

(viii) *Date Report Delivered to Congress: June 16, 2023*

* As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

The Netherlands—MQ-9A Block 5 Aircraft

The Government of the Netherlands has requested to buy up to four (4) MQ-9A Block 5 aircraft; up to three (3) Unmanned Aircraft Systems (UAS) MQ-9 Mobile Ground Control Systems (MGCS); up to thirty (30) Embedded Global Positioning Systems/Internal Navigation Systems (EGI) devices, Airborne, with Selective Availability Anti-Spoofing Module (SAASM) or M-Code; up to eight (8) AN/DAS-4 Multi-Spectral Targeting Systems; and up to twenty (20) Lynx AN/APY-8 Synthetic Aperture Radars. Also included are Reaper Engines; Selex Seaspray Synthetic Aperture Radars; SeaVue Maritime Radars; M299 Hellfire Longbow missile launchers; AN/ARC-210 radios; Line-of-Sight (LOS) Ground Data Terminals; Ruggedized Aircraft Maintenance Test Stations (RAMTS); AN/APX-119 and other Identification Friend or Foe transponders; KIV-77 Cryptographic Appliques; KY-100M narrowband/wideband terminals; AN/

PYQ-10 Simple Key Loaders; Satellite Communications (SATCOM) Earth Terminal Subsystems (SETSS); spare parts, consumables, accessories, and repair and return support; secure communication equipment and cryptographic devices; major/minor modifications, maintenance, and maintenance support; munitions support and support equipment; unclassified software delivery and support; transportation support; unclassified publications and technical documentation; studies and surveys; U.S. Government and contractor engineering, technical, and logistics support services; and other related elements of logistical and program support. The estimated total cost is \$611 million.

This proposed sale will support the foreign policy goals and national security objectives of the United States by improving the security of a NATO Ally that is a force for political stability and economic progress in Europe.

The proposed sale will improve the Netherlands' capability to meet current and future threats. The MQ-9A aircraft will support Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) missions as well as Air Attack and Counter Maritime Operation tasks. The Netherlands already has MQ-9A aircraft in its inventory and will have no difficulty absorbing these articles and services into its armed forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The principal contractor will be General Atomics-Aeronautical Systems, Poway, CA. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will not require the assignment of additional contractor or government representatives.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 23-45

Notice of Proposed Issuance of Letter of Offer Pursuant to Section 36(b)(1) of the Arms Export Control Act

Annex

Item No. vii

(vii) *Sensitivity of Technology:*

1. The MQ-9A Block 5 Unmanned Aerial System (UAS) is a Medium Altitude, long-endurance (MALE) remotely piloted aircraft that can be used for surveillance, military reconnaissance, and targeting missions. Real-time missions are flown under the control of a pilot in a Ground Control

Station (GCS). A datalink is maintained that uplinks control commands and downlinks video with telemetry data. Line-of-Sight (LOS) communication is enabled through C-Band datalink and Beyond-Line-of-Sight (BLOS) communication is enabled through Ku-Band Satellite Communication (SATCOM). Control of the aircraft and control of the payload are managed through direct manual inputs by the crew or by preprogramming the mission. Preprogrammed missions are planned and uploaded by the pilots via the GCS and are executed through the control of an onboard suite of redundant computers and sensors. Payload imagery and data are downlinked to the GCS. The pilot may initiate preprogrammed missions once the aircraft is airborne and land the aircraft when the mission is completed. Pilots can change preprogrammed mission parameters as often as required. When operated BLOS, aircraft control is given to other strategically placed Ground Control Stations—permitting remote split operations (RSO). The MQ-9A Block 5 is designed to carry 850 pounds of internal payload with maximum fuel and can carry multiple mission payloads aloft. The MQ-9A Block 5 will be configured for the following payloads: Electro-Optical/Infrared (E.O./IR), Synthetic Aperture Radar (SAR), Electronic Support Measures (ESM), Signals Intelligence (SIGINT), laser designators, and various weapons packages.

a. The GCS can be either fixed or mobile. Both versions incorporate workstations that allow operators to control and monitor the aircraft, as well as record and exploit downlinked payload data.

b. The Embedded Global Positioning System/Inertial Navigation System (GPS/INS) (EGI) with Selective Availability Anti-Spoofing Module (SAASM)—or M-Code receiver when available—and Precise Positioning Service (PPS) is a self-contained navigation system that provides the following information: acceleration, velocity, position, attitude, platform azimuth, magnetic and true heading, altitude, body angular rates, time tags, and coordinated universal time (UTC) synchronized time. SAASM or M-Code enables the GPS receiver to access the encrypted P (Y or M) signal, providing protection against active spoofing attacks.

c. LOS Ground Data terminals and Ku-Band SATCOM GA-ASI Transportable Earth Stations (GATES) provide command, control, and data acquisition.

2. The Raytheon Multi-Spectral Targeting System-D (MTS-D) AN/DAS-4 integrates electro-optical (EO), infrared (IR), laser designation and laser illumination capabilities to provide detection, ranging, and tracking capabilities specifically for high-altitude applications. This advanced EO and IR system provides long-range surveillance, high altitude target acquisition, tracking, range finding, and laser designation for the Hellfire missile and for all tri-service and NATO laser-guided munitions. The MTS-D provides greater target location accuracy than the MTS-B.

3. The AN/APY-8 Lynx Synthetic Aperture Radar (SAR) and Ground Moving Target Indicator (GMTI) system provides all-weather surveillance, tracking, and targeting for military and commercial customers from manned and unmanned vehicles.

4. The Selex Seaspray is an Active Electronically Scanned Array (AESA) surveillance radar suitable for a range of capabilities from long-range search to small target detection.

5. The SeaVue Maritime Multi-Role Patrol Radar is a synthetic aperture X-band radar that provides small-target maritime detection in high seas, maritime search (including submarine periscopes and semi-submersibles), radar imaging of ocean targets, and weather detection and avoidance.

6. The M299 launcher provides mechanical and electrical interface between the Hellfire missile and aircraft.

7. ARC-210 radios are voice communications radio systems equipped with HAVE QUICK II and Second Generation Antijam Tactical UHF Radio for NATO (SATURN), which employ cryptographic technology. Other waveforms may be included as needed.

8. The Ruggedized Aircraft Maintenance Test Station (RAMTS) is a mobile test station used to perform diagnostic and operational checks on the MQ-9.

9. The AN/APX-119 is an Identification Friend or Foe (IFF) transponder that provides military aircraft with a secure combat identification capability to help reduce fratricide and enhance battlespace awareness, while providing safe access to civilian airspace.

10. The KIV-77 is a cryptographic applique for IFF. It can be loaded with Mode 5 classified elements.

11. The KY-100M is a lightweight terminal for secure voice and data communications. The KY-100M provides wideband/narrowband half-duplex communication. Operating in tactical ground, marine, and airborne applications, the KY-100M enables secure communication with a broad range of radio and satellite equipment.

12. The AN/PYQ-10 Simple Key Loader is a handheld device used for securely receiving, storing, and transferring data between compatible cryptographic and communications equipment.

13. The highest level of classification of defense articles, components, and services included in this potential sale is SECRET.

14. If a technologically advanced adversary were to obtain knowledge of the specific hardware and software elements, the information could be used to develop countermeasures that might reduce weapon system effectiveness or be used in the development of a system with similar or advanced capabilities.

15. A determination has been made that the Netherlands can provide substantially the same degree of protection for the sensitive technology

being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

16. All defense articles and services listed in this transmittal have been authorized for release and export to the Netherlands.

[FR Doc. 2024-23193 Filed 10-7-24; 8:45 am]

BILLING CODE 6001-FR-P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 23-0L]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense (DoD).

ACTION: Arms sales notice.

SUMMARY: The DoD is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT:

Pamela Young at (703) 953-6092, pamela.a.young14.civ@mail.mil, or dsca.ncr.rsrcmgmt.list.cns-mbx@mail.mil.

SUPPLEMENTARY INFORMATION: This 36(b)(5)(C) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives with attached Transmittal 23-0L.

Dated: October 2, 2024.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

BILLING CODE 6001-FR-P



DEFENSE SECURITY COOPERATION AGENCY

2800 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-2800

June 21, 2023

The Honorable Kevin McCarthy
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(5)(C) of the Arms Export Control Act (AECA), as amended, we are forwarding Transmittal No. 23-0L. This notification relates to enhancements or upgrades from the level of sensitivity of technology or capability described in the Section 36(b)(1) AECA certification 21-13 of April 30, 2021.

Sincerely,

James A. Hursch
Director

Enclosures:

1. Transmittal

BILLING CODE 6001-FR-C

Transmittal No. 23-0L

REPORT OF ENHANCEMENT OR
UPGRADE OF SENSITIVITY OF
TECHNOLOGY OR CAPABILITY (SEC.
36(B)(5)(C), AECA)

(i) *Purchaser:* Government of India
(ii) *Sec. 36(b)(1), AECA Transmittal*
No.: 21-13

Date: April 30, 2021

Implementing Agency: Navy

Funding Source: National Funds

(iii) *Description:* On April 30, 2021,
Congress was notified by congressional
certification transmittal number 21-13
of the possible sale, under Section
36(b)(1) of the Arms Export Control Act,

of six (6) P-8I Patrol Aircraft; eight (8)
Multifunctional Information
Distribution System-Joint Tactical Radio
Systems 5 (MIDS-JTRS 5) (6 installed, 2
spares); forty-two (42) AN/AAR-54
Missile Warning Sensors (36 installed, 6
spares); and fourteen (14) LN-251 with
Embedded Global Positioning Systems
(GPS)/Inertial Navigations Systems
(EGIs) (12 installed, 2 spares). Also
included were CFM56-7 commercial
engines; Tactical Open Mission
Software (ITOMS) variant for P-8I;
Electro-Optical (EO) and Infrared (IR)
MX-20HD; AN/AAQ-2(V) Acoustic
System; ARES-1000 commercial variant
Electronic Support Measures; AN/APR-

39D Radar Warning Receiver; AN/ALE-
47 Counter Measures Dispensing
System; support equipment and spares;
publications; repair and return;
transportation; aircraft ferry; training;
U.S. Government and contractor
engineering, software, technical, and
logistics support services; and other
related elements of logistical and
program support. The total estimated
cost was \$2.42 billion. MDE constituted
\$2.05 billion of this total.

This transmittal reports a net value
increase in MDE of \$.55 billion to \$2.6
billion due to price increases. No
additional MDE equipment will be
included. The following non-MDE will
be added: AN/ARC-210 RT-2036(C)

UHF/VHF Radio Transceivers; AN/AAR-47 Missile Warning Sensors; Electronic Countermeasure AN/ALQ-213; Advanced Digital Antenna Production (ADAP) Antenna Electronics (AE); and Advanced Digital Antenna Production (ADAP) Controlled Reception Pattern Antenna (CRPA). Also, the non-MDE AN/APR-39D Radar Warning Receiver previously notified will be replaced with the AN/APR-39D(V)2 Processor Radar. These revisions will result in an increase in estimated non-MDE value of \$.23 billion to \$.60 billion. The total case value will increase by \$0.78 billion, resulting in an estimated total case value of \$3.2 billion.

(iv) *Significance*: The additional non-MDE represents an increase in capability over what was previously notified. The proposed articles and services will improve India's capability to meet current and future threats by providing critical capabilities to India's maritime operations.

(v) *Justification*: This proposed sale will support the foreign policy and national security objectives of the United States by helping to strengthen the U.S.-Indian strategic relationship and to improve the security of a major defensive partner which continues to be an important force for political stability, peace, and economic progress in the Indo-Pacific and South Asia region.

(vi) *Sensitivity of Technology*: The Sensitivity of Technology Statement contained in the original notification applies to items reported here with the exceptions of:

- Electronic Warfare Self Protection (EWSP). The aircraft EWSP consists of the ALQ-213 Electronic Warfare Management System (EWMS), the AN/ALE-47 Counter Measures Dispensing System (CMDS), and the AN/AAR-47 Missile Warning System.
- AN/ARC-210 RT-2036(C) Radios. The RT-2036(C) is the first airborne software-defined radio to have MUOS (Mobile User Objective System) Satellite Communications (SATCOM), Second Generation Anti-Jam Tactical UHF Radio for NATO (SATURN) Electronic Counter-Counter Measures (ECCM) waveform, high-speed mobile ad hoc networked communications, and beyond-line-of-sight connectivity for secure data, voice and imagery.
- AN/APR-39D(V)2 Processor Radar. The Radar provides increased Probability of Detection (Sensitivity), corrects ID/Ambiguity Resolution, improves Direction of Arrival (DOA) accuracy versus Circular Polarized (CP) Emitters, and improves DOA Indications versus CID Band Emitters.

- Advanced Digital Antenna Production (ADAP) Antenna Electronics (AE). The ADAP Antenna provides digital anti-jam processing and protected GPS L1 and GPS L2 for the majority of Radio-Frequency (RF) and Infrared Frequency (IF) input GPS receivers.

- Advanced Digital Antenna Production (ADAP) Controlled Reception Pattern Antenna (CRPA). The CRPA Antenna removes interference based on direction of arrival.

The highest level of classification of defense articles, components, and services included in this potential sale is SECRET.

(vii) *Date Report Delivered to Congress*: June 21, 2023

[FR Doc. 2024-23191 Filed 10-7-24; 8:45 am]

BILLING CODE 6001-FR-P

DEPARTMENT OF DEFENSE

Office of the Secretary

Local Redevelopment Authority for the Pueblo Chemical Depot

AGENCY: Office of Local Defense Community Cooperation, Department of Defense (DoD).

ACTION: Base Closure and Realignment.

SUMMARY: This notice provides the point of contact, address, and telephone number for the Local Redevelopment Authority (LRA) for the Pueblo Chemical Depot, formerly known as the Pueblo Depot Activity, in Pueblo, Colorado to be closed, managed, and disposed of by the Army pursuant to the National Defense Authorization Act (NDAA) for Fiscal Year 2024 and in accordance with procedures and authorities of the Defense Base Closure and Realignment Act of 1990. The Pueblo Depot Activity Development Authority, dba PuebloPlex, was recognized as the LRA by the Secretary of Defense, acting through the DoD, Office of Local Defense Community Cooperation (OLDCC) on July 25, 2024. Representatives of state and local governments, and other parties interested in the redevelopment of the installation should contact this LRA.

FOR FURTHER INFORMATION CONTACT: The following point of contact information will also be published simultaneously in a newspaper of general circulation in the area of the installation. Mr. Patrick J. O'Brien, Director, Office of Local Defense Community Cooperation, Office of the Secretary of Defense, 2231 Crystal Drive, Suite 520, Arlington VA 22202-4704, (703) 697-2123.

SUPPLEMENTARY INFORMATION: This notice is provided pursuant to section 2905(b)(7)(B)(ii) of the Defense Base Closure and Realignment Act of 1990. Authority for PuebloPlex was enacted by the State of Colorado through the Pueblo Depot Activity Development Authority Act. This law established a broad-based governing public board representing the local governments concerned with authority to apply for and receive state and Federal grant funds; to contract, finance, acquire and hold, by lease or deed, all properties of the Pueblo Chemical Depot, formerly known as the Pueblo Depot Activity, made available pursuant to section 2854 of the NDAA FY24 in accordance with procedures and authorities of the Defense Base Closure and Realignment Act of 1990, a base closure law as defined by section 10 of title 10, United States Code.

Local Redevelopment Authority (LRA)

Colorado

Installation: Pueblo Chemical Depot.
LRA Name: Pueblo Depot Activity Development Authority dba PuebloPlex.
Point of Contact: Breann Magnone, Public Engagement Coordinator.
Address: 45825 CO-HWY 96 E, Building 46, Pueblo, CO 81006.
Phone: (719) 947-3770.
Email address: HQ@PuebloPlex.com.

Dated: October 2, 2024.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2024-23194 Filed 10-7-24; 8:45 am]

BILLING CODE 6001-FR-P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 23-0J]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense (DoD).

ACTION: Arms sales notice.

SUMMARY: The DoD is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT: Pamela Young at (703) 953-6092, pamela.a.young14.civ@mail.mil, or dsca.ncr.rsrmgmt.list.cns-mbx@mail.mil.

SUPPLEMENTARY INFORMATION: This 36(b)(5)(C) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a

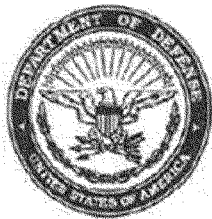
copy of a letter to the Speaker of the House of Representatives with attached Transmittal 23-0J.

Dated: October 2, 2024.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

BILLING CODE 6001-FR-P



DEFENSE SECURITY COOPERATION AGENCY

2800 Defense Pentagon
Washington, DC 20301-2800

June 27, 2023

The Honorable Kevin McCarthy
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(5)(C) of the Arms Export Control Act (AECA), as amended, we are forwarding Transmittal No. 23-0J. This notification relates to enhancements or upgrades from the level of sensitivity of technology or capability described in the Section 36(b)(1) AECA certification 19-02 dated February 6, 2019.

Sincerely,

A handwritten signature in dark ink, reading "James A. Hursch".

James A. Hursch
Director

Enclosure:

1. Transmittal

Transmittal No. 23-0J

*REPORT OF ENHANCEMENT OR
UPGRADE OF SENSITIVITY OF
TECHNOLOGY OR CAPABILITY (SEC.
36(B)(5)(C), AECA)*

(i) *Purchaser:* Government of India

(ii) *Sec. 36(b)(1), AECA Transmittal
No.:* 19-02

Date: February 6, 2019

Implementing Agency: Air Force

Funding Source: National Funds

(iii) *Description:* On February 6, 2019, Congress was notified by congressional certification transmittal number 19-02 of the possible sale, under Section 36(b)(1) of the Arms Export Control Act, of two (2) Self-Protection Suites (SPS) consisting of AN/AAQ 24(V)N Large Aircraft Infrared Countermeasures (LAIRCM), ALQ-211(V)8 Advanced Integrated Defensive Electronic Warfare Suite (AIDEWS), and AN/ALE-47 Counter-Measures Dispensing System

(CMDS) to protect two (2) Boeing 777 Head-of-State aircraft. The LAIRCM system consists of three (3) Guardian Laser Terminal Assemblies (GLTA), six (6) Missile Warning Sensors (MWS) for AN/AAQ-24 (V)N, one (1) LAIRCM System Processor Replacements (LSPR), one (1) Control Indicator Unit Replacement (CIUR), one (1) Smart Card Assembly and one (1) High-Capacity Card (HCC)/User Data Memory (UDM) card. Major Defense Equipment (MDE)

consisted of twelve (12) Guardian Laser Transmitter Assemblies (GLTA) AN/AAQ-24(V)N (6 installed, 6 spares); eight (8) LAIRCM System Processor Replacements (LSPR) AN/AAQ-24(V)N (2 installed, 6 spares); twenty-three (23) Missile Warning Sensors (MWS) for AN/AAR-54 AAQ-24(V)N (12 installed, 11 spares); and five (5) AN/ALE-47 Counter-Measures Dispensing System (CMDS) (2 installed, 3 spares). Also included were Advanced Integrated Defensive Electronic Warfare Suites (AIDEWS), LAIRCM CIURs, Smart Card Assemblies, HCCs, and UDM cards, as well as: initial spares; consumables; repair and return support; support equipment; Self-Protection Suite (SPS) engineering design; integration; hardware integration; flight test and certification; selective availability anti-spoofing modules (SAASM); warranties, publications, and technical documentation; training and training equipment; field service representatives; U.S. Government and contractor engineering, technical and logistics support services; and other related elements of logistical and program support. The total estimated cost was \$190 million. MDE constituted \$26 million of this total.

This transmittal reports the addition of the following non-MDE items and services: impulse cartridges, chaff, and flares; software delivery and support; computer program identification number (CPIN) systems; major

modifications, maintenance, and maintenance support; additional spares and repair and return support; additional test and integration equipment and support; facilities and construction support; and transportation support. No additional MDE is being reported; however, the total estimated MDE value will increase by \$7 million to \$33 million due to price increases. The estimated total case value will increase to \$379 million.

(iv) *Significance*: This proposed sale will improve India's capability to meet and deter current and future threats by ensuring the sustainability of its SPS.

(v) *Justification*: This proposed sale will support the foreign policy and national security objectives of the U.S. by helping to strengthen the U.S.-Indian strategic relationship and to improve the security of a major defensive partner which continues to be an important force for political stability, peace, and economic progress in the Indo-Pacific and South Asia region.

(vi) *Sensitivity of Technology*: The Sensitivity of Technology Statement contained in the original notification applies to items reported here.

The highest level of classification of defense articles, components, and services included in this potential sale is SECRET.

(vii) *Date Report Delivered to Congress*: June 27, 2023.

[FR Doc. 2024-23181 Filed 10-7-24; 8:45 am]

BILLING CODE 6001-FR-C

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 23-46]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense (DoD).

ACTION: Arms sales notice.

SUMMARY: The DoD is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT:

Pamela Young at (703) 953-6092, pamela.a.young14.civ@mail.mil, or dsca.ncr.rsrcmgmt.list.cns-mbx@mail.mil.

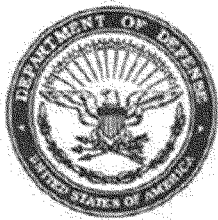
SUPPLEMENTARY INFORMATION: This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives with attached Transmittal 23-46, and Policy Justification.

Dated: October 2, 2024.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

BILLING CODE 6001-FR-P



DEFENSE SECURITY COOPERATION AGENCY

2800 Defense Pentagon
Washington, DC 20301-2800

June 13, 2023

The Honorable Kevin McCarthy
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 23-46, concerning the Navy's proposed Letter(s) of Offer and Acceptance to the Government of France for defense articles and services estimated to cost \$160 million. We will issue a news release to notify the public of this proposed sale upon delivery of this letter to your office.

Sincerely,

James A. Hursch
Director

Enclosures:

1. Transmittal
2. Policy Justification

BILLING CODE 6001-FR-C

Transmittal No. 23-46

Notice of Proposed Issuance of Letter of Offer Pursuant to Section 36(b)(1) of the Arms Export Control Act, as amended

(i) *Prospective Purchaser:* Government of France

(ii) *Total Estimated Value:*

Major Defense Equipment *	\$ 0 million
Other	\$160 million

Total	\$160 million

(iii) *Description and Quantity or Quantities of Articles or Services Under*

Consideration for Purchase: Foreign Military Sales (FMS) case FR-P-GWR for non-MDE E-2C Hawkeye sustainment support was originally valued at \$99.6 million, below the congressional notification threshold. The Government of France has requested the case be amended to include additional non-MDE E-2C Hawkeye sustainment items and services. This case amendment will increase the total case value above the total non-MDE notification threshold

and thus notification of the entire FMS case is now required.

Major Defense Equipment (MDE):

None

Non-MDE:

Included is an Engine Component Improvement Program (CIP); software updates; technical publication; U.S. Government and contractor technical and product support and assistance; and other related elements of logistics and program support.

(iv) *Military Department:* Navy (FR-P-GWR)

(v) *Prior Related Cases, if any:* FR-P-SBG, FR-P-SBI, FR-P-SBL

(vi) *Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid:* None

(vii) *Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold:* None

(viii) *Date Report Delivered to Congress:* June 13, 2023

* As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

France—E-2C Hawkeye Sustainment Support

The Government of France has requested to buy additional non-MDE E-2C Hawkeye sustainment items and services that will be added to a previously implemented case. The original Foreign Military Sales (FMS) case, valued at \$99.6 million, included E-2C Hawkeye sustainment support. Therefore, this notification is for E-2C Hawkeye sustainment support, which includes an Engine Component Improvement Program (CIP); software updates; technical publications; U.S. Government, and contractor technical and product support and assistance; and other related elements of logistics and program support. The estimated total cost is \$160 million.

This proposed sale will support the foreign policy and national security objectives of the U.S. by helping to

improve the security of a NATO Ally that is an important force for political stability and economic progress in Europe.

The proposed sale will improve France's capability to meet current and future threats in the European domain by maintaining its E-2C fleet in fully mission-capable status and sustain interoperability with U.S. and NATO forces. France will have no difficulty absorbing these articles and services into its armed forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The principal U.S. contractor will be Northrop Grumman, Melbourne, FL. There are no known offset agreements proposed in connection with this potential sale.

Implementation of the proposed sale will require occasional government personnel to visit France on a temporary basis and one contractor personnel to be permanently assigned in France in conjunction with program technical oversight and support requirements, including program and technical reviews as well as training and maintenance support.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

[FR Doc. 2024-23190 Filed 10-7-24; 8:45 am]

BILLING CODE 6001-FR-P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 23-36]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense (DoD).

ACTION: Arms sales notice.

SUMMARY: The DoD is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT:

Pamela Young at (703) 953-6092, pamela.a.young14.civ@mail.mil, or dsca.ncr.rsrcmgmt.list.cns-mbx@mail.mil.

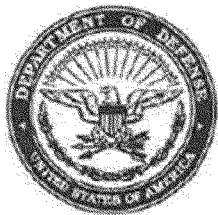
SUPPLEMENTARY INFORMATION: This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives with attached Transmittal 23-36, Policy Justification, and Sensitivity of Technology.

Dated: October 2, 2024.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

BILLING CODE 6001-FR-P



DEFENSE SECURITY COOPERATION AGENCY
 2800 Defense Pentagon
 Washington, DC 20301-2800

June 14, 2023

The Honorable Kevin McCarthy
 Speaker of the House
 U.S. House of Representatives
 H-209, The Capitol
 Washington, DC 20515

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 23-36, concerning the Army's proposed Letter(s) of Offer and Acceptance to the Government of Spain for defense articles and services estimated to cost \$48.2 million. We will issue a news release to notify the public of this proposed sale upon delivery of this letter to your office.

Sincerely,

James A. Hursch
 James A. Hursch
 Director

Enclosures:

1. Transmittal
2. Policy Justification
3. Sensitivity of Technology

BILLING CODE 6001-FR-C

Transmittal No. 23-36

Notice of Proposed Issuance of Letter of Offer Pursuant to Section 36(b)(1) of the Arms Export Control Act, as amended

(i) *Prospective Purchaser:* Government of Spain

(ii) *Total Estimated Value:*

Major Defense Equipment *	\$32.8 million
Other	15.4 million
Total	48.2 million

(iii) *Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:* Foreign Military Sales (FMS) case SP-B-WAT was below congressional notification threshold at \$21.87 million (\$12.20 million in MDE) and included one hundred eighteen (118) M982A1 Excalibur tactical projectiles. The Government of Spain has requested that the case be amended to include an additional one hundred fifty-three (153) M982A1 Excalibur tactical projectiles.

This amendment will push the current case above the MDE notification threshold and thus requires notification of the entire case.

Major Defense Equipment (MDE):
 Two hundred seventy-one (271)
 M982A1 Excalibur Tactical
 Projectiles

Non-MDE:

Also included is a portable electronic Fire Control System (FCS); Improved Platform Integration Kit; Propelling Charge Modular Artillery Charge System; Simple Key Loaders

(SKL); crypto cable; training aids; technical data; U.S. Government technical assistance; transportation; Excalibur spare parts; artillery cleaning sections; new equipment training; repair and return support equipment; support related to collateral damage estimation tables; and other related elements of logistics and program support.

(iv) *Military Department: Army (SP-B-WAT)*

(v) *Prior Related Cases, if any: None*

(vi) *Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None*

(vii) *Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: See Attached Annex*

(viii) *Date Report Delivered to Congress: June 14, 2023*

* As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Spain—Excalibur Projectiles

The Government of Spain has requested to buy an additional one hundred fifty-three (153) M982A1 Excalibur tactical projectiles that will be added to a previously implemented case whose value was under the congressional notification threshold. The original FMS case, valued at \$21.87 million, included one hundred eighteen (118) M982A1 Excalibur tactical projectiles. This notification is for a combined total of two hundred seventy-one (271) M982A1 Excalibur tactical projectiles. Also included is a portable electronic Fire Control System (FCS); Improved Platform Integration Kit; Propelling Charge Modular Artillery Charge System; Simple Key Loaders (SKL); crypto cable; training aids; technical data; U.S. Government technical assistance; transportation; Excalibur spare parts; artillery cleaning sections; new equipment training; repair and return support equipment; support related to collateral damage estimation tables; and other related elements of logistics and program support. The total estimated cost is \$48.2 million.

This proposed sale will support the foreign policy and national security of the United States by improving the security of a NATO ally which is an important force for political stability and economic progress in Europe.

The proposed sale will improve Spain's capability to meet current and future threats and will enhance interoperability with U.S. forces and other allied forces. The enhanced capability will also strengthen its homeland defense. Spain will have no difficulty absorbing this equipment into its armed forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The principal contractor will be Raytheon Company Missile Systems, McAlester, OK. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this sale will not require the assignment of any U.S. Government or contractor representatives to Spain.

There will be no adverse impact on U.S. defense readiness because of this proposed sale.

Transmittal No. 23–36

Notice of Proposed Issuance of Letter of Offer Pursuant to Section 36(b)(1) of the Arms Export Control Act

Annex

Item No. vii

(vii) *Sensitivity of Technology:*

1. The M982A1 Excalibur 155 mm, High Explosive Projectile is an all-up projectile with Global Positioning System (GPS)-aided precision guidance capability. The Excalibur provides the ability to accurately engage targets at distances up to 25 miles. Excalibur is commonly fired from U.S. Army and Marine Corps towed and self-propelled howitzer systems, including the M777 and M109.

2. The highest level of classification of defense articles, components, and services included in this potential sale is SECRET.

3. If a technologically advanced adversary were to obtain knowledge of the specific hardware and software elements, the information could be used to develop countermeasures that might reduce weapon system effectiveness or be used in the development of a system with similar or advanced capabilities.

4. A determination has been made that Spain can provide substantially the same degree of protection for the sensitive technology being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

5. All defense articles and services listed in this transmittal have been authorized for release and export to the Government of Spain.

[FR Doc. 2024–23180 Filed 10–7–24; 8:45 am]

BILLING CODE 6001–FR–P

DEPARTMENT OF EDUCATION

Applications for New Awards; Personnel Development To Improve Services and Results for Children With Disabilities—Personnel Preparation of Special Education, Early Intervention, and Related Services Personnel at Historically Black Colleges and Universities, Tribally Controlled Colleges and Universities, and Other Minority Serving Institutions

AGENCY: Office of Special Education and Rehabilitative Services, Department of Education.

ACTION: Notice.

SUMMARY: The Department of Education (Department) is issuing a notice inviting applications for new awards for fiscal year (FY) 2025 for Personnel Development to Improve Services and Results for Children with Disabilities—Personnel Preparation of Special Education, Early Intervention, and Related Services Personnel at Historically Black Colleges and Universities, Tribally Controlled Colleges and Universities, and Other Minority Serving Institutions.

DATES:

Applications Available: October 8, 2024.

Deadline for Transmittal of Applications: December 12, 2024.

Deadline for Intergovernmental Review: February 5, 2025.

Pre-Application Webinar Information: No later than October 15, 2024, the Office of Special Education and Rehabilitative Services will post details on pre-recorded informational webinars designed to provide technical assistance to interested applicants. Links to the webinars may be found at www.ed.gov/about/ed-offices/osers/osep/new-osep-grant-competitions.

ADDRESSES: For the addresses for obtaining and submitting an application, please refer to our Common Instructions for Applicants to Department of Education Discretionary Grant Programs, published in the **Federal Register** on December 7, 2022 (87 FR 75045) and available at www.federalregister.gov/documents/2022/12/07/2022-26554/common-instructions-for-applicants-to-department-of-education-discretionary-grant-programs.

FOR FURTHER INFORMATION CONTACT:

Tracie Dickson, U.S. Department of Education, 400 Maryland Avenue SW, Room 4A10, Washington, DC 20202. Telephone: 202–245–7844. Email: Tracie.Dickson@ed.gov.

If you are deaf, hard of hearing, or have a speech disability and wish to

access telecommunications relay services, please dial 7-1-1.

SUPPLEMENTARY INFORMATION:

Full Text of Announcement

I. Funding Opportunity Description

Purpose of Program: The purposes of this program are to (1) help address State-identified needs for personnel preparation in special education, early intervention, related services, and regular education to work with children, including infants, toddlers, and youth with disabilities; and (2) ensure that those personnel have the necessary skills and knowledge, derived from practices that have been determined through scientifically based research, to be successful in serving those children.

Assistance Listing Number (ALN): 84.325M.

OMB Control Number: 1820-0028.

Priorities: This competition includes one absolute priority and two competitive preference priorities. In accordance with 34 CFR 75.105(b)(2)(v), the absolute priority is from allowable activities specified in the statute (see sections 662 and 681 of the Individuals with Disabilities Education Act (IDEA) (20 U.S.C. 1462 and 1481)). Competitive Preference Priority 1 is from the Administrative Priorities for Discretionary Grants Programs published in the **Federal Register** on March 9, 2020 (85 FR 13640) (Administrative Priorities), and Competitive Preference Priority 2 is from the Secretary's Supplemental Priorities and Definitions for Discretionary Grants Programs published in the **Federal Register** on December 10, 2021 (86 FR 70612) (Supplemental Priorities).

Absolute Priority: For FY 2025 and any subsequent year in which we make awards from the list of unfunded applications from this competition, this priority is an absolute priority. Under 34 CFR 75.105(c)(3), we consider only applications that meet this priority.

This priority is:

Personnel Preparation of Special Education, Early Intervention, and Related Services Personnel at Historically Black Colleges and Universities, Tribally Controlled Colleges and Universities, and Minority Serving Institutions.

Background:

The purpose of this priority is to prepare scholars who are fully credentialed to serve children, including infants, toddlers, and youth, with disabilities (children with disabilities). The Department is committed to promoting equity for children with disabilities in accessing

educational resources and opportunities. The Department also places a high priority on increasing the number of personnel, including increasing personnel from racially and ethnically diverse backgrounds and personnel who are multilingual, who provide services to children with disabilities. Further, the Department seeks to fund applications from new potential grantees that prepare special education, early intervention, and related services leadership personnel. To support these goals, under this absolute priority, the Department will fund projects within Historically Black Colleges and Universities (HBCUs), Tribally Controlled Colleges and Universities (TCCUs), and Minority Serving Institutions (MSIs) that prepare special education, early intervention, and related services personnel at the bachelor's degree, certification, master's degree, educational specialist degree, or clinical doctoral degree levels to serve in a variety of settings, including natural environments (the home and community settings in which children with and without disabilities participate), early learning programs, child care, classrooms, and schools.

Over time, the population of children receiving services under the IDEA is increasingly racially and ethnically diverse. In 2021, of those receiving services under IDEA, approximately 50 percent of infants and toddlers with disabilities, ages birth through two, were children of color; approximately 49 percent of preschool children with disabilities, ages three through five (not in kindergarten), were from racially and ethnically diverse backgrounds; while approximately 54 percent of students with disabilities, ages five (in kindergarten) through 21, were from racially and ethnically diverse backgrounds (U.S. Department of Education, 2022a).

While children of color make up approximately 54 percent of public school enrollment (National Center for Education Statistics, 2022) and greater than 50 percent of children receiving early intervention and special education services, results from the 2020–2021 National Teacher and Principal Survey (U.S. Department of Education, 2022b) show that about 80 percent of all public K–12 school teachers were non-Hispanic White.

Moreover, the demographics of personnel entering the early intervention and special education fields are not aligned with the demographics of the children and families served under IDEA, though IDEA specifically authorizes grants to recruit and prepare personnel,

especially from groups that are underrepresented in the teaching profession. The Department's Office of Special Education Programs (OSEP) Personnel Development Program Data Collection System data reveal that the race/ethnicity of scholars obtaining a graduate degree to serve children with disabilities in FY 2020 was 65.8 percent White, 14.5 percent Hispanic, 11.5 percent Black, 3.9 percent Asian, 0.7 percent American Indian or Alaska Native, 1.4 percent Native Hawaiian or Other Pacific Islander, and 2.2 percent Two or More Races.

The data demonstrate that there is insufficient ethnic and racial diversity among special education, early intervention, and related service personnel (Ondrasek et al., 2020; Carver-Thomas, 2018; Sutchter et al., 2016). This lack of diversity is of concern, as research indicates that increasing the racial, ethnic, and linguistic diversity of personnel can have positive impacts on all children. Children of color and children who are multilingual, with and without disabilities, demonstrate improved academic achievement and behavioral and social and emotional development when they are taught by teachers who are from racially and ethnically diverse backgrounds and multilingual teachers (Bryan, 2021; Carver-Thomas, 2018, April). States and policymakers are also highlighting the need to address the lack of racial and ethnic diversity of those working in early intervention and special education and are recognizing the need to develop career pathways and comprehensive strategies to recruit, prepare, develop, and retain educators from racially and ethnically diverse backgrounds (Carver-Thomas, 2018; Colorado Department of Higher Education, 2022; Gardner et al., 2019).

Priority:

The purpose of this priority is to prepare and increase the number of personnel, including personnel from racially and ethnically diverse backgrounds and personnel who are multilingual, who are fully credentialed to serve children with disabilities. Under this absolute priority, the Department will fund grantees from HBCUs,¹ TCCUs,² and other MSIs³ that

¹ For purposes of this priority, "Historically Black Colleges and Universities" means colleges and universities that meet the criteria in 34 CFR 608.2.

² For purposes of this priority, "Tribally Controlled Colleges and Universities" has the meaning ascribed to it in section 316(b)(3) of the Higher Education Act of 1965 (HEA).

³ For purposes of this priority, "Minority-Serving Institution" means an institution that is eligible to receive assistance under sections 316 through 320 of part A of title III, under part B of title III, or under

prepare scholars⁴ in special education, early intervention, and related services⁵ at the bachelor's degree, certification,⁶ master's degree, educational specialist degree, or clinical doctoral degree levels to serve in a variety of settings, including natural environments (the home and community settings in which children with and without disabilities participate), early learning programs, child care, classrooms, and schools. This priority will provide support to help address identified needs for personnel, including personnel from racially and ethnically diverse backgrounds and personnel who are multilingual, with the knowledge and skills to promote high expectations and provide effective evidence-based⁷ interventions and services that improve outcomes for children with disabilities, including children of color with

title V of the HEA. For purposes of this priority, the Department will use the FY 2024 Eligibility Matrix to determine MSI eligibility (see www.ed.gov/grants-and-programs/grants-higher-education/eligibility-designations-higher-education-programs).

⁴For the purposes of this priority, "scholar" is limited to an individual who: (a) is pursuing a bachelor's, certification, master's, educational specialist degree, or clinical doctoral degree in special education, early intervention, or related services (as defined in this notice); (b) receives scholarship assistance as authorized under section 662 of IDEA (34 CFR 304.3(g)); (c) will be eligible for a license, endorsement, or certification from a State or national credentialing authority following completion of the degree program identified in the application; and (d) will be able to be employed in a position that serves children with disabilities for a minimum of 51 percent of their time or case load. Individuals pursuing degrees in general education or early childhood education do not qualify as "scholars" eligible for scholarship assistance.

⁵For the purposes of this priority, "related services" includes the following: speech-language pathology and audiology services; assistive technology services; interpreting services; intervener services; psychological services; applied behavior analysis; physical therapy and occupational therapy; recreation, including therapeutic recreation; artistic and cultural services, including music, art, dance and movement therapy; social work services; counseling services, including rehabilitation counseling; and orientation and mobility services.

⁶For the purposes of this priority, "certification" refers to programs of study for individuals with bachelor's, master's, educational specialist, or clinical doctoral degrees that lead to licensure, endorsement, or certification from a State or national credentialing authority following completion of the degree program that qualifies graduates to teach or provide services to children with disabilities. Programs of study that lead to a certificate of completion awarded from an HBCU, TCCU, or MSI, but do not lead to licensure, endorsement, or certification from a State or national credentialing authority, do not qualify.

⁷For the purposes of this priority, "evidence-based" means, at a minimum, evidence that demonstrates a rationale (as defined in 34 CFR 77.1), where a key project component (as defined in 34 CFR 77.1) included in the project's logic model (as defined in 34 CFR 77.1) is informed by research or evaluation findings that suggest the project component is likely to improve relevant outcomes (as defined in 34 CFR 77.1).

disabilities and children with disabilities who are multilingual.

Note: Projects may include individuals who are not funded as scholars, but are in degree programs (e.g., general education, early childhood education, administration) that are cooperating with the grantee's project. These individuals may participate in the coursework, assignments, field or clinical experiences, and other opportunities required by the scholars' program of study (e.g., speaker series, monthly seminars) if doing so does not diminish the benefit for project-funded scholars (e.g., by reducing funds available for scholar support or limiting opportunities for scholars to participate in project activities).

Note: Personnel preparation degree programs that prepare all scholars to be dually certified can qualify under this priority.

Note: Applicants under this priority may not submit the same proposal under Preparation of Early Intervention and Special Education Personnel Serving Children with Disabilities who have High-Intensity Needs, ALN 84.325K. Applicants may submit substantively different proposals under ALN 84.325M and ALN 84.325K. OSEP will not fund similar personnel preparation projects within the same IHE across ALN 84.325K and ALN 84.325M competitions.

Note: Eligible applicants may submit only one application under this competition.

Focus Areas:

Within this absolute priority, the Secretary intends to support projects under the following two focus areas: (A) Preparing Personnel to Serve Infants, Toddlers, and Preschool-Age Children with Disabilities; and (B) Preparing Personnel to Serve School-Age Children with Disabilities.

In this competition, Focus Areas (A) and (B) each constitute a separate funding category. The Secretary intends to award grants under each of these funding categories, provided that applications submitted are of sufficient quality.

Applicants must identify the specific focus area (i.e., A or B) under which they are applying as part of the competition title on the application cover sheet (SF 424, line 12).

Focus Area A: Preparing Personnel to Serve Infants, Toddlers, and Preschool-Age Children with Disabilities. This focus area is for projects that prepare early intervention, early childhood special education, and related services personnel, including scholars from racially and ethnically diverse backgrounds and scholars who are

multilingual, to provide services to infants, toddlers, and preschool children with disabilities. Programs preparing early intervention special educators and early childhood special educators must prepare graduates to meet State and national professional organization standards for early intervention special educators and early childhood special educators such as the Division of Early Childhood Initial Practice-Based Professional Preparation Standards for Early Intervention/Early Childhood Special Education (Division for Early Childhood, 2020). In States where certification in early intervention is combined with certification in early childhood special education, applicants may propose a combined early intervention and early childhood special education personnel preparation project under this focus area. In States where the certification age range is other than birth through five, applicants must propose a preparation project that complies with the State's certification requirements for early intervention and early childhood special education personnel. Programs that prepare general early childhood educators are not eligible under this competition regardless of whether a degree in early childhood education complies with the State's certification requirements for early intervention special educators or early childhood special educators.

Focus Area B: Preparing Personnel to Serve School-Age Children with Disabilities. This focus area is for projects that prepare special education and related services personnel, including personnel from racially and ethnically diverse backgrounds and personnel who are multilingual, to work with school-age children with disabilities.

Focus Areas A and B:

Applicants may, but are not required to, use up to the first 12 months of the project period and up to \$100,000 awarded in the first budget period for planning, including enhancing an existing program, without enrolling scholars. If an applicant chooses to use the first year for program planning, then the applicant must provide sufficient justification for requesting program planning time and include the goals, objectives, key personnel and collaborators, and intended outcomes of program planning in year one, a description of the proposed strategies and activities to be supported, and a timeline for the work. The proposed strategies may include activities such as—

(1) Updating coursework, course outcomes, scholar competencies, assignments, or extensive and

coordinated field or clinical experiences needed to support preparation for special education, early intervention, or related services scholars, including scholars from racially and ethnically diverse backgrounds, scholars who are multilingual, and scholars with disabilities serving children with disabilities, including children of color with disabilities and children with disabilities who are multilingual;

(2) Building the capacity (*e.g.*, hiring a field supervisor, providing professional development for faculty and field supervisors) of the project to prepare scholars, including scholars from racially and ethnically diverse backgrounds, scholars who are multilingual, and scholars with disabilities, to serve children with disabilities and their families, including children and families of color and who are multilingual;

(3) Purchasing needed resources (*e.g.*, additional teaching supplies, technology-based resources, or other specialized equipment to enhance instruction); or

(4) Establishing relationships, which may include developing memorandums of understandings or other formal agreements, with early intervention and early childhood programs or schools, to serve as sites for field or clinical experiences needed to support the project. These sites may include high-need local educational agencies (LEAs),⁸ high-poverty schools,⁹ schools identified for comprehensive support and improvement,¹⁰ and schools implementing a targeted support and improvement plan¹¹ for children with

disabilities; early childhood and early intervention programs located within the geographic boundaries of a high-need LEA; and early childhood and early intervention programs located within the geographical boundaries of an LEA serving the highest percentage of schools identified for comprehensive support and improvement or implementing targeted support and improvement plans in the State.

In addition to requesting up to \$100,000 for planning, additional Federal funds may also be requested for scholar support and other grant activities occurring in year one of the project.

Note: Applicants proposing projects to develop, expand, or add a new area of emphasis within the curriculum of early intervention, special education, or related services programs must provide, in their applications, information on how these new areas will be sustained once Federal funding ends.

Note: Project periods under this priority may be up to 60 months. Projects should be designed to ensure that all proposed scholars successfully complete the program within 60 months from the start of the project. The Secretary may reduce continuation awards for any project in which scholar recruitment is not on track or scholars are not on track to complete the program by the end of the 60 months.

To be considered for funding under this absolute priority, applicants must meet the application requirements contained in the priority. All projects funded under this absolute priority also must meet the programmatic and administrative requirements specified in the priority.

To meet the requirements of this priority, an applicant must—

(a) Demonstrate, in the narrative section of the application under “Significance” how—

(1) The proposed project will address the need in the proposed preparation focus area to increase the number of personnel, including increasing the number from racially and ethnically diverse backgrounds, the number of personnel who are multilingual, and the number of personnel with disabilities, who are prepared to provide effective and equitable, evidence-based, and culturally and linguistically responsive instruction, interventions, and services that improve outcomes, including

plan” means a school identified for targeted support and improvement by a State that has developed and is implementing a school-level targeted support and improvement plan to improve student outcomes based on the indicators in the statewide accountability system as defined in section 1111(d)(2) of the ESEA.

literacy and math outcomes, for children with disabilities;

(2) The proposed project will increase the number of personnel with competencies¹² in the proposed preparation focus area to provide effective and equitable, evidence-based, and culturally and linguistically responsive instruction, interventions, and services, including through distance education, that improve outcomes, including literacy and math outcomes, for children with disabilities, including children of color with disabilities and children with disabilities who are multilingual; and

(3) The applicant has successfully graduated students from its program, including students who are from racially and ethnically diverse backgrounds, students who are multilingual, and students with disabilities, by including data disaggregated by race, national origin and primary language(s), and disability status; and the number of students who have graduated in the last five years.

(b) Demonstrate, in the narrative section of the application under “Quality of project services,” how—

(1) The project will conduct its planning activities if the applicant elects to use up to the first 12 months of the project period and up to \$100,000 awarded in the first budget period for planning;

(2) The project will recruit and retain scholars to participate in the project. To meet this requirement, the applicant must describe—

(i) The selection criteria the project will use to identify program applicants for admission into the program;

(ii) The specific recruitment strategies the project will use to attract a diverse pool of applicants, including from groups that are underrepresented in the field, including applicants from racially and ethnically diverse backgrounds, applicants who are multilingual, and applicants with disabilities; and

Note: Applicants should engage in focused outreach and recruitment to increase the number of applicants from groups that are traditionally underrepresented in the field, including applicants from racially and ethnically diverse backgrounds, applicants who are multilingual, and applicants with disabilities, but the selection criteria the applicant intends to use must ensure equal access and treatment of all applicants seeking admission to the

⁸For the purposes of this priority, “high-need LEA” means an LEA (a) that serves not fewer than 10,000 children from families with incomes below the poverty line; or (b) for which not less than 20 percent of the children are from families with incomes below the poverty line.

⁹For the purposes of this priority, “high-poverty school” means a school in which at least 50 percent of students are from low-income families as determined using one of the measures of poverty specified in section 1113(a)(5) of the Elementary and Secondary Education Act of 1965, as amended (ESEA). For middle and high schools, eligibility may be calculated on the basis of comparable data from feeder schools. Eligibility as a high-poverty school under this definition is determined on the basis of the most currently available data.

¹⁰For the purposes of this priority, “school implementing a comprehensive support and improvement plan” means a school identified for comprehensive support and improvement by a State under section 1111(c)(4)(D) of the ESEA that includes (a) not less than the lowest performing 5 percent of all schools in the State receiving funds under title I, part A of the ESEA; (b) all public high schools in the State failing to graduate one third or more of their students; and (c) public schools in the State described in section 1111(d)(3)(A)(i)(II) of the ESEA.

¹¹For the purposes of this priority, “school implementing a targeted support and improvement

¹²For the purposes of this priority, “competencies” means what a person knows and can do—the knowledge, skills, and dispositions necessary to effectively function in a role (National Professional Development Center on Inclusion, 2011).

program, and must be consistent with applicable law, including Federal civil rights laws.

(iii) The approach that will be used to mentor and support all scholars, including any specific approaches to supporting scholars from groups that are underrepresented in the field, including scholars from racially and ethnically diverse backgrounds, scholars who are multilingual, and scholars with disabilities, with the goal of helping them complete the program within the project period and preparing them for careers in special education, early intervention, or related services;

(3) The project will promote the acquisition of competencies needed by special education, early intervention, or related services personnel in the project's proposed preparation focus area to provide effective and equitable, evidence-based, and culturally and linguistically responsive instruction, interventions, and services that improve outcomes, including literacy and math outcomes, for children with disabilities, including children of color with disabilities and children with disabilities who are multilingual. To address this requirement, the applicant must—

(i) Describe how the proposed components, such as coursework; field or clinical experiences in early intervention, early childhood, or school settings; work-based experiences; or other opportunities provided to scholars, and sequence of the components will enable the scholars to acquire the competencies needed by applicable personnel to serve children with disabilities, including children of color and children who are multilingual in a school or early intervention setting;

(ii) Describe how the proposed project will reflect current evidence-based practices (EBPs) to prepare scholars to provide effective and equitable, evidence-based, and culturally and linguistically responsive instruction, interventions, and services that improve outcomes for children with disabilities, including literacy and math outcomes, including children of color and children who are multilingual, in a variety of early childhood and early intervention settings or educational settings;

(iii) Describe the pedagogical practices that will be used to ensure that the program is inclusive regarding race, ethnicity, culture, language, and disability status so that scholars are prepared to create inclusive, supportive, equitable, unbiased, and identity-safe learning environments for children with disabilities; and

(iv) Describe how the project will engage various partners, including

families of color, families who are multilingual, and parents with disabilities; public or private agencies, schools, or programs, including those that serve racially and ethnically diverse populations, multilingual populations, and children with disabilities; and centers or organizations that provide services to children with disabilities, including children of color with disabilities and children with disabilities who are multilingual, to inform and support project components.

(c) Demonstrate, in the narrative section of the application under "Quality of the project personnel and management plan," how—

(1) The project director and other key project personnel are qualified to prepare scholars in the project's preparation focus area;

(2) The project director and other key project personnel will manage the components of the project; and

(3) The time commitments of the project director and other key project personnel are adequate to meet the objectives of the proposed project.

(d) Demonstrate, in the narrative section of the application under "Adequacy of resources," how—

(1) Information regarding the types of accommodations and resources available to fully support scholars' well-being and a work-life balance (e.g., university and community mental health supports, counseling services, health resources, housing resources, child care) will be disseminated and how the project will support scholars to access those accommodations and resources on a timely basis, if needed, while the scholar is in the program;

(2) The types of accommodations and resources provided to support scholars' well-being and a work-life balance will be individualized based on scholars' cultural, academic, social and emotional, and disability-related needs with the goals of supporting them to complete the program; and

(3) The budget is adequate for meeting the project objectives and mitigating financial burden to scholars in completing the program of study.

Note: Scholar support does not need to be uniform for all scholars and should be customized for individual scholars based on scholars' financial needs, including consideration of all costs associated with the cost of attendance, even if that means enrolling fewer scholars. Scholar support can include support for cost of attendance (e.g., tuition and fees; university student health insurance; an allowance for books, materials, and supplies; an allowance for miscellaneous personal expenses; an allowance for dependent

care, such as child care; an allowance for transportation; and an allowance for room and board), travel in conjunction with training assignments, including conference registration, and stipends to support scholars' completion of the program and professional development. Projections for scholar support should consider tuition increases and cost of living increases over the project period. Projects that prepare personnel at the bachelor's degree level may not provide scholar support during the first two years (e.g., freshman and sophomore years) of the degree program.

(e) Demonstrate, in the narrative section of the application under "Quality of the project evaluation," how the applicant will—

(1) Evaluate how well the goals or objectives of the proposed project have been met. To meet this requirement the applicant must describe—

(i) The relevant outcomes to be measured for both the project and the scholars, particularly the acquisition of scholars' competencies; and

(ii) The evaluation methodologies, data collection methods, and data analyses that will be used; and

(2) Collect and analyze data on all scholars supported by the project, including data disaggregated by race, national origin, primary language(s), and disability status, to inform the proposed project on an ongoing basis.

(f) Demonstrate, in the appendices or narrative under "Required project assurances" as directed, that the following requirements are met. The applicant must—

(1) Include, in Appendix A of the application—

(i) Charts, tables, figures, graphs, screen shots, and visuals that provide information directly relating to the application requirements for the narrative. Appendix A should not be used for supplementary information. Please note that charts, tables, figures, graphs, and screen shots can be single-spaced when placed in Appendix A; and

(ii) A letter of support from a public or private partnering agency, school, or program, that states it will provide scholars with a field or clinical experience in a high-need LEA, a high-poverty school, a school implementing a comprehensive support and improvement plan, a school implementing a targeted support and improvement plan for children with disabilities, a State educational agency, an early childhood or early intervention program located within the geographical boundaries of a high-need LEA, or an early childhood or early intervention program located within the geographical

boundaries of an LEA serving the highest percentage of schools identified for comprehensive support and improvement or implementing targeted support and improvement plans in the State;

(2) Include in Appendix B of the application—

(i) A table that lists the project's required coursework and includes the course title, brief description, learning goals, and relevant State or national professional organization personnel standards for each course; and

(ii) Four exemplars of course syllabi required by the degree program that reflect EBP across the areas of assessment; social, emotional, and behavioral development and learning; inclusive practices; instructional strategies; and literacy if appropriate, and consider the unique needs of children of color with disabilities and children with disabilities who are multilingual;

(3) Include in the application budget attendance by the project director at a three-day project directors' meeting in Washington, DC, during each year of the project; and

(4) Provide an assurance that—

(i) The project will meet the requirements in 34 CFR 304.23, particularly those related to (A) informing all scholarship recipients of their service obligation commitment; and (B) disbursing scholarships. Failure by a grantee to properly meet these requirements is a violation of the grant award that may result in the grantee being liable for returning any misused funds to the Department;

(ii) The project will meet the statutory requirements in section 662(e) through (h) of IDEA;

(iii) The project will be operated in a manner consistent with nondiscrimination requirements contained in Federal civil rights laws;

(iv) All the syllabi for the project's required coursework will be provided at the request of OSEP;

(v) At least 65 percent of the total award over the project period (*i.e.*, up to 60 months) will be used for scholar support;

(vi) Scholar support provided by the project (*e.g.*, tuition and fees; university student health insurance; an allowance for books, materials, and supplies; an allowance for miscellaneous personal expenses; an allowance for dependent care, such as child care; an allowance for transportation; an allowance for room and board; an allowance for travel in conjunction with training assignments including conference registration; and stipends to support scholars' completion of the program and

professional development) is not conditioned on scholars working for the grantee (*e.g.*, personnel at the IHE);

(vii) The project director, key personnel, and scholars will actively participate in learning opportunities (*e.g.*, webinars, briefings) supported by OSEP. This is intended to promote opportunities for participants to understand reporting requirements, share resources, and generate new ideas by discussing topics of common interest to participants across projects including Department priorities and needs in the field;

(viii) The project website, if applicable, will be of high quality, with an easy-to-navigate design that meets government or industry-recognized standards for web accessibility;

(ix) Scholar accomplishments (*e.g.*, public service, awards, publications, conference presentations) will be reported in annual and final performance reports; and

(x) Annual data will be submitted on each scholar who receives grant support (OMB Control Number 1820–0686). The primary purposes of the data collection are to track the service obligation fulfillment of scholars who receive funds from OSEP grants and to collect data for program performance measure reporting under 34 CFR 75.110. Data collection includes the submission of a signed, completed pre-scholarship agreement and exit certification for each scholar funded under an OSEP grant (see paragraph (f)(4)(i) of this priority). Applicants are encouraged to visit the Personnel Development Program Data Collection System website at <https://pdp.ed.gov/osep> for further information about this data collection requirement.

Competitive Preference Priorities: For FY 2025 and any subsequent year in which we make awards from the list of unfunded applications from this competition, these priorities are competitive preference priorities. Under 34 CFR 75.105(c)(2)(i), we award an additional 5 points to an application that meets Competitive Preference Priority 1 and an additional 5 points to an application that meets Competitive Preference Priority 2. Applicants should indicate in the abstract if competitive preference priorities are addressed, and which competitive preference priorities are being addressed.

The competitive preference priorities are:

Competitive Preference Priority 1: *Applications from New Potential Grantees (0 or 5 points).*

(a) Under this priority, an applicant must demonstrate that the applicant (*e.g.*, the IHE) has not had an active discretionary grant under the ALN

84.325M, 84.325K, or 84.325R, including through membership in a group application submitted in accordance with 34 CFR 75.127–75.129, in the last five years before the deadline date for submission of applications under ALN 84.325M.

(b) For the purpose of this priority, a grant is active until the end of the grant's project or funding period, including any extensions of those periods that extend the grantee's authority to obligate funds.

Competitive Preference Priority 2: *Promoting Equity in Student Access to Educational Resources and Opportunities (0 or 5 points).*

Under this priority, an applicant must demonstrate the project will be implemented by or in partnership with one or both of the following entities:

- (a) HBCUs (as defined in this notice).
- (b) TCCUs (as defined in this notice).

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Waiver of Proposed Rulemaking: Under the Administrative Procedure Act (APA) (5 U.S.C. 553) the Department generally offers interested parties the opportunity to comment on proposed priorities. Section 681(d) of IDEA, however, makes the public comment requirements of the APA inapplicable to the absolute priority in this notice.

Program Authority: 20 U.S.C. 1462 and 1481.

Note: Projects will be awarded and must be operated in a manner consistent with the nondiscrimination requirements contained in Federal civil rights laws.

Applicable Regulations: (a) The Education Department General Administrative Regulations in 34 CFR parts 75, 77, 79, 81, 82, 84, 86, 97, 98, and 99. (b) The Office of Management and Budget (OMB) Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement) in 2 CFR part 180, as adopted and amended as regulations of the Department in 2 CFR part 3485. (c) The Guidance for Federal Financial Assistance in 2 CFR part 200, as adopted and amended as regulations of the Department in 2 CFR part 3474. (d) The regulations for this program in 34 CFR part 304. (e) The Administrative Priorities. (f) The Supplemental Priorities.

Note: The Department will implement the changes included in the OMB final rule, OMB Guidance for Federal

Financial Assistance (www.federalregister.gov/documents/2024/04/22/2024-07496/guidance-for-federal-financial-assistance), formerly called, Office of Management and Budget Guidance for Grants and Agreements, which amends 2 CFR part 200, on October 1, 2024. Grant applicants who anticipate a performance period start date on or after October 1, 2024, should follow the provisions stated in the updated 2 CFR part 200, when preparing an application. For more information about these updated regulations please visit: <https://www2.ed.gov/policy/fund/guid/uniform-guidance/index.html>. The Department will continue to provide more resources on our web page as they become available.

Note: The regulations in 34 CFR part 86 apply to IHEs only.

II. Award Information

Type of Award: Discretionary grants. **Estimated Available Funds:** The Administration has requested \$125,000,000 for the Personnel Development to Improve Services and Results for Children with Disabilities program for FY 2025, of which we intend to use an estimated \$3,000,000 for this competition. The actual level of funding, if any, depends on final congressional action. However, we are inviting applications to allow enough time to complete the grant process if Congress appropriates funds for this program.

Contingent upon the availability of funds and the quality of applications, we may make additional awards in FY 2026 from the list of unfunded applications from this competition.

Estimated Range of Awards: \$150,000–\$350,000 per year.

Estimated Average Size of Awards: \$250,000 per year.

Maximum Award: We will not make an award exceeding \$1,250,000 per project for a project period of 60 months or an award that exceeds \$350,000 for any single budget period.

Note: Applicants must describe, in their applications, the amount of funding being requested for each 12-month budget period.

Estimated Number of Awards: 12.

Project Period: Up to 60 months.

Note: The Department is not bound by any estimates in this notice.

III. Eligibility Information

1. Eligible Applicants: IHEs and private nonprofit organizations.

Note: To meet the absolute priority, eligible applicants (*i.e.*, IHEs) must have a bachelor's degree, certification, master's degree, educational specialist

degree, or clinical doctoral degree program that prepare scholars in special education, early intervention, and related services at an HBCU, TCCU, or other MSI or be a private nonprofit organization that has the legal authority to enter into grants and cooperative agreements with the Federal government on behalf of an applicant (*i.e.*, IHE) that has a bachelor's degree, certification, master's degree, educational specialist degree, or clinical doctoral degree program that prepare scholars in special education, early intervention, and related services at an HBCU, TCCU, or other MSI.

Note: If you are a nonprofit organization, under 34 CFR 75.51, you may demonstrate your nonprofit status by providing: (1) proof that the Internal Revenue Service currently recognizes the applicant as an organization to which contributions are tax deductible under section 501(c)(3) of the Internal Revenue Code; (2) a statement from a State taxing body or the State attorney general certifying that the organization is a nonprofit organization operating within the State and that no part of its net earnings may lawfully benefit any private shareholder or individual; (3) a certified copy of the applicant's certificate of incorporation or similar document if it clearly establishes the nonprofit status of the applicant; or (4) any item described above if that item applies to a State or national parent organization, together with a statement by the State or parent organization that the applicant is a local nonprofit affiliate.

2. a. Cost Sharing or Matching: This competition does not require cost sharing or matching.

b. Indirect Cost Rate Information: This program uses a training indirect cost rate. This limits indirect cost reimbursement to an entity's actual indirect costs, as determined in its negotiated indirect cost rate agreement, or 8 percent of a modified total direct cost base, whichever amount is less. For more information regarding training indirect cost rates, see 34 CFR 75.562. For more information regarding indirect costs, or to obtain a negotiated indirect cost rate, please see www.ed.gov/about/ed-offices/oyo#Indirect-Cost-Division.

c. Administrative Cost Limitation: This program does not include any program-specific limitation on administrative expenses. All administrative expenses must be reasonable and necessary and conform to Cost Principles described in 2 CFR part 200 subpart E of the Guidance for Federal Financial Assistance.

3. Subgrantees: Under 34 CFR 75.708(b) and (c), a grantee under this

competition may award subgrants—to directly carry out project activities described in its application—to the following types of entities: IHEs, nonprofit organizations suitable to carry out the activities proposed in the application, and other public agencies. The grantee may award subgrants to entities it has identified in an approved application or that it selects through a competition under procedures established by the grantee, consistent with 34 CFR 75.708(b)(2).

4. Other General Requirements:

a. Recipients of funding under this competition must make positive efforts to employ and advance in employment qualified individuals with disabilities (see section 606 of IDEA).

b. Applicants for, and recipients of, funding must, with respect to the aspects of their proposed projects relating to the absolute priority, involve individuals with disabilities, or parents of individuals with disabilities ages birth through 26, in planning, implementing, and evaluating the project (see section 682(a)(1)(A) of IDEA).

IV. Application and Submission Information

1. Application Submission

Instructions: Applicants are required to follow the Common Instructions for Applicants to Department of Education Discretionary Grant Programs, published in the **Federal Register** on December 7, 2022 (87 FR 75045) and available at www.federalregister.gov/documents/2022/12/07/2022-26554/common-instructions-for-applicants-to-department-of-education-discretionary-grant-programs, which contain requirements and information on how to submit an application.

2. *Intergovernmental Review:* This competition is subject to Executive Order 12372 and the regulations in 34 CFR part 79. Information about Intergovernmental Review of Federal Programs under Executive Order 12372 is in the application package for this competition.

3. *Funding Restrictions:* We reference regulations outlining funding restrictions in the *Applicable Regulations* section of this notice.

4. *Recommended Page Limit:* The application narrative is where you, the applicant, address the selection criteria that reviewers use to evaluate your application. We recommend that you limit the application narrative to no more than 40 pages and use the following standards:

- A “page” is 8.5” × 11”, on one side only, with 1” margins at the top, bottom, and both sides.

- Double-space (no more than three lines per vertical inch) all text in the application narrative, including titles, headings, footnotes, quotations, reference citations, and captions, as well as all text in charts, tables, figures, graphs, and screen shots.

- Use a font that is 12 point or larger.
- Use one of the following fonts: Times New Roman, Courier, Courier New, or Arial.

The recommended page limit does not apply to the cover sheet; the budget section, including the narrative budget justification; the assurances and certifications; or the abstract (follow the guidance provided in the application package for completing the abstract), the table of contents, the list of priority requirements, the resumes, the reference list, the letters of support, or the appendices. However, the recommended page limit does apply to all of the application narrative, including all text in charts, tables, figures, graphs, and screen shots.

V. Application Review Information

1. *Selection Criteria:* The selection criteria for this competition are from 34 CFR 75.210 and are as follows:

(a) *Significance (10 points).*

(1) The Secretary considers the significance of the proposed project.

(2) In determining the significance of the proposed project, the Secretary considers the following factors:

(i) The extent to which the proposed project will prepare personnel for fields in which shortages have been demonstrated; and

(ii) The importance or magnitude of the results or outcomes likely to be attained by the proposed project, especially improvements in teaching and student achievement.

(b) *Quality of project services (45 points).*

(1) The Secretary considers the quality of the services to be provided by the proposed project.

(2) In determining the quality of the services to be provided by the proposed project, the Secretary considers the quality and sufficiency of strategies for ensuring equal access and treatment for eligible project participants who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability.

(3) In addition, the Secretary considers the following factors:

(i) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice;

(ii) The extent to which the training or professional development services to

be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services;

(iii) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services; and

(iv) The extent to which the proposed activities constitute a coherent, sustained program of training in the field.

(c) *Quality of project personnel and quality of the management plan (20 points).*

(1) The Secretary considers the quality of the project personnel and the quality of the management plan for the proposed project.

(2) In determining the quality of project personnel, the Secretary considers the extent to which the applicant encourages applications for employment from persons who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability.

(3) In addition, the Secretary considers the following factors:

(i) The qualifications, including relevant training and experience, of key project personnel;

(ii) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks; and

(iii) The extent to which the time commitments of the project director and principal investigator and other key project personnel are appropriate and adequate to meet the objectives of the proposed project.

(d) *Adequacy of resources (10 points).*

(1) The Secretary considers the adequacy of resources of the proposed project.

(2) In determining the adequacy of resources of the proposed project, the Secretary considers the following factors:

(i) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization; and

(ii) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(e) *Quality of the project evaluation (15 points).*

(1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.

(2) In determining the quality of the evaluation, the Secretary considers the following factors:

(i) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project; and

(ii) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.

2. *Review and Selection Process:* We remind potential applicants that in reviewing applications in any discretionary grant competition, the Secretary may consider, under 34 CFR 75.217(d)(3), the past performance of the applicant in carrying out a previous award, such as the applicant's use of funds, achievement of project objectives, and compliance with grant conditions. The Secretary may also consider whether the applicant failed to submit a timely performance report or submitted a report of unacceptable quality.

In addition, in making a competitive grant award, the Secretary requires various assurances, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

In the event there are two or more applications with the same final score, and there are insufficient funds to fully support each of these applications, the scores under selection criterion (b) *Quality of project services* will be used as a tiebreaker. If the scores remain tied, then the scores under selection criterion (d) *Adequacy of resources* will be used to break the tie.

3. *Additional Review and Selection Process Factors:* In the past, the Department has had difficulty finding peer reviewers for certain competitions because many individuals who are eligible to serve as peer reviewers have conflicts of interest. The standing panel requirements under section 682(b) of IDEA also have placed additional constraints on the availability of reviewers. Therefore, the Department has determined that for some discretionary grant competitions, applications may be separated into two or more groups and ranked and selected for funding within specific groups. This procedure will make it easier for the Department to find peer reviewers by ensuring that greater numbers of individuals who are eligible to serve as reviewers for any particular group of applicants will not have conflicts of interest. It also will increase the quality, independence, and fairness of the

review process, while permitting panel members to review applications under discretionary grant competitions for which they also have submitted applications.

4. *Risk Assessment and Specific Conditions:* Consistent with 2 CFR 200.206, before awarding grants under this competition the Department conducts a review of the risks posed by applicants. Under 2 CFR 200.208, the Secretary may impose specific conditions, and under 2 CFR 3474.10, in appropriate circumstances, high-risk conditions on a grant if the applicant or grantee is not financially stable; has a history of unsatisfactory performance; has a financial or other management system that does not meet the standards in 2 CFR part 200, subpart D; has not fulfilled the conditions of a prior grant; or is otherwise not responsible.

5. *Integrity and Performance System:* If you are selected under this competition to receive an award that over the course of the project period may exceed the simplified acquisition threshold (currently \$250,000), under 2 CFR 200.206(a)(2) we must make a judgment about your integrity, business ethics, and record of performance under Federal awards—that is, the risk posed by you as an applicant—before we make an award. In doing so, we must consider any information about you that is in the integrity and performance system (currently referred to as the Federal Awardee Performance and Integrity Information System (FAPIIS)), accessible through the System for Award Management. You may review and comment on any information about yourself that a Federal agency previously entered and that is currently in FAPIIS.

Please note that, if the total value of your currently active grants, cooperative agreements, and procurement contracts from the Federal Government exceeds \$10,000,000, the reporting requirements in 2 CFR part 200, Appendix XII, require you to report certain integrity information to FAPIIS semiannually. Please review the requirements in 2 CFR part 200, Appendix XII, if this grant plus all the other Federal funds you receive exceed \$10,000,000.

6. *In General:* In accordance with the Guidance for Federal Financial Assistance located at 2 CFR part 200, all applicable Federal laws, and relevant Executive guidance, the Department will review and consider applications for funding pursuant to this notice inviting applications in accordance with—

(a) Selecting recipients most likely to be successful in delivering results based on the program objectives through an

objective process of evaluating Federal award applications (2 CFR 200.205);

(b) Prohibiting the purchase of certain telecommunication and video surveillance services or equipment in alignment with section 889 of the National Defense Authorization Act of 2019 (Pub. L. 115–232) (2 CFR 200.216);

(c) Providing a preference, to the extent permitted by law, to maximize use of goods, products, and materials produced in the United States (2 CFR 200.322); and

(d) Terminating agreements in whole or in part to the greatest extent authorized by law if an award no longer effectuates the program goals or agency priorities (2 CFR 200.340).

VI. Award Administration Information

1. *Award Notices:* If your application is successful, we notify your U.S. Representative and U.S. Senators and send you a Grant Award Notification (GAN); or we may send you an email containing a link to access an electronic version of your GAN. We also may notify you informally.

If your application is not evaluated or not selected for funding, we notify you.

2. *Administrative and National Policy Requirements:* We identify administrative and national policy requirements in the application package and reference these and other requirements in the *Applicable Regulations* section of this notice.

We reference the regulations outlining the terms and conditions of an award in the *Applicable Regulations* section of this notice and include these and other specific conditions in the GAN. The GAN also incorporates your approved application as part of your binding commitments under the grant.

3. *Open Licensing Requirements:* Unless an exception applies, if you are awarded a grant under this competition, you will be required to openly license to the public grant deliverables created in whole, or in part, with Department grant funds. When the deliverable consists of modifications to pre-existing works, the license extends only to those modifications that can be separately identified and only to the extent that open licensing is permitted under the terms of any licenses or other legal restrictions on the use of pre-existing works. Additionally, a grantee or subgrantee that is awarded competitive grant funds must have a plan to disseminate these public grant deliverables. This dissemination plan can be developed and submitted after your application has been reviewed and selected for funding. For additional information on the open licensing

requirements please refer to 2 CFR 3474.20.

4. *Reporting:* (a) If you apply for a grant under this competition, you must ensure that you have in place the necessary processes and systems to comply with the reporting requirements in 2 CFR part 170 should you receive funding under the competition. This does not apply if you have an exception under 2 CFR 170.110(b).

(b) At the end of your project period, you must submit a final performance report, including financial information, as directed by the Secretary. If you receive a multiyear award, you must submit an annual performance report that provides the most current performance and financial expenditure information as directed by the Secretary under 34 CFR 75.118. The Secretary may also require more frequent performance reports under 34 CFR 75.720(c). For specific requirements on reporting, please go to www.ed.gov/fund/grant/apply/appforms/appforms.html.

(c) Under 34 CFR 75.250(b), the Secretary may provide a grantee with additional funding for data collection analysis and reporting. In this case the Secretary establishes a data collection period.

5. *Performance Measures:* For the purposes of Department reporting under 34 CFR 75.110, the Department has established a set of performance measures, including long-term measures, that are designed to yield information on various aspects of the effectiveness and quality of the Personnel Development to Improve Services and Results for Children with Disabilities program. These measures include: (1) the percentage of preparation programs that incorporate scientifically or evidence-based practices into their curricula; (2) the percentage of scholars completing the preparation program who are knowledgeable and skilled in evidence-based practices that improve outcomes for children with disabilities; (3) the percentage of scholars who exit the preparation program prior to completion due to poor academic performance; (4) the percentage of scholars completing the preparation program who are working in the area(s) in which they were prepared upon program completion; (5) the Federal cost per scholar who completed the preparation program; (6) the percentage of scholars who completed the preparation program and are employed in high-need districts; and (7) the percentage of scholars who completed the preparation program and who are rated effective by their employers.

In addition, the Department will gather information on the following outcome measures: the number and percentage of scholars proposed by the grantee in its application that were actually enrolled and making satisfactory academic progress in the current academic year; the number and percentage of enrolled scholars who are on track to complete the training program by the end of the project's original grant period; and the percentage of scholars who completed the preparation program and are employed in the field of special education for at least two years.

Grantees may be asked to participate in assessing and providing information on these aspects of program quality.

6. *Continuation Awards:* In making a continuation award under 34 CFR 75.253, the Secretary considers, among other things: whether a grantee has made substantial progress in achieving the goals and objectives of the project; whether the grantee has expended funds in a manner that is consistent with its approved application and budget; and, if the Secretary has established performance measurement requirements, whether the grantee has made substantial progress in achieving the performance targets in the grantee's approved application.

In making a continuation award, the Secretary also considers whether the grantee is operating in compliance with the assurances in its approved application, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

VII. Other Information

Accessible Format: On request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT**, individuals with disabilities can obtain this document and a copy of the application package in an accessible format. The Department will provide the requestor with an accessible format that may include Rich Text Format (RTF) or text format (txt), a thumb drive, an MP3 file, braille, large print, audiotope, compact disc, or other accessible format.

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Glenna Wright-Gallo,

Assistant Secretary for Special Education and Rehabilitative Services.

[FR Doc. 2024–23256 Filed 10–7–24; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Personnel Development To Improve Services and Results for Children With Disabilities—Preparation of Early Intervention and Special Education Personnel Serving Children With Disabilities Who Have High-Intensity Needs

AGENCY: Office of Special Education and Rehabilitative Services, Department of Education.

ACTION: Notice.

SUMMARY: The Department of Education (Department) is issuing a notice inviting applications for new awards for fiscal year (FY) 2025 for Personnel Development to Improve Services and Results for Children with Disabilities—Preparation of Early Intervention and Special Education Personnel Serving Children with Disabilities who have High-Intensity Needs.

DATES:

Applications Available: October 8, 2024.

Deadline for Transmittal of Applications: December 3, 2024.

Deadline for Intergovernmental Review: February 5, 2025.

Pre-Application Webinar Information: No later than October 15, 2024, the Office of Special Education and Rehabilitative Services will post details on pre-recorded informational webinars designed to provide technical assistance to interested applicants. Links to the webinars may be found at www.ed.gov/about/ed-offices/osers/osep/new-osep-grant-competitions.

ADDRESSES: For the addresses for obtaining and submitting an application, please refer to our Common Instructions for Applicants to Department of Education Discretionary Grant Programs, published in the **Federal Register** on December 7, 2022 (87 FR 75045) and available at www.federalregister.gov/documents/

2022/12/07/2022-26554/common-instructions-for-applicants-to-department-of-education-discretionary-grant-programs.

FOR FURTHER INFORMATION CONTACT:

Sunyoung Ahn, U.S. Department of Education, 400 Maryland Avenue SW, Room 4A10, Potomac Center Plaza, Washington, DC 20202. Telephone: 202-987-0141. Email: Sunyoung.Ahn@ed.gov.

If you are deaf, hard of hearing, or have a speech disability and wish to access telecommunications relay services, please dial 7-1-1.

SUPPLEMENTARY INFORMATION:

Full Text of Announcement

I. Funding Opportunity Description

Purpose of Program: The purposes of this program are to (1) help address State-identified needs for personnel preparation in early intervention, special education, related services, and regular education to work with children, including infants, toddlers, and youth with disabilities; and (2) ensure that those personnel have the necessary skills and knowledge, derived from practices that have been determined through scientifically based research, to be successful in serving those children.

Assistance Listing Number (ALN): 84.325K.

OMB Control Number: 1820-0028.

Priorities: This competition includes one absolute priority and one competitive preference priority. In accordance with 34 CFR 75.105(b)(2)(v), the absolute priority is from allowable activities specified in the statute (see sections 662 and 681 of the Individuals with Disabilities Education Act (IDEA) (20 U.S.C. 1462 and 1481)). The competitive preference priority is from the Administrative Priorities for Discretionary Grants Programs published in the **Federal Register** on March 9, 2020 (85 FR 13640) (Administrative Priorities).

Absolute Priority: For FY 2025 and any subsequent year in which we make awards from the list of unfunded applications from this competition, this priority is an absolute priority. Under 34 CFR 75.105(c)(3), we consider only applications that meet this priority.

This priority is:

Preparation of Early Intervention and Special Education Personnel Serving Children with Disabilities who have High-Intensity Needs.

Background:

The purpose of this priority is to prepare scholars who are fully credentialed to serve children, including infants, toddlers, and youth with disabilities (children with

disabilities) who have high-intensity needs.¹ The Department is committed to promoting equity for children with disabilities to access educational resources and opportunities. A priority for the Department is to increase the number of personnel, including increasing the number of multilingual personnel and personnel from racially and ethnically diverse backgrounds, who provide services to children with disabilities. To support these goals, under this absolute priority, the Department will fund high-quality projects that prepare personnel in early intervention (EI), early childhood special education (ECSE), blindness and visual impairments (BVI), deafness and hard of hearing (DHH), deaf-blindness (DB), and adapted physical education (APE) at the bachelor's degree, certification, master's degree, or educational specialist degree levels for professional practice in a variety of education settings, including natural environments (the home and community settings in which infants and toddlers with and without disabilities participate), early childhood programs, classrooms, schools, and distance learning environments; including increasing the number of multilingual personnel and personnel from racially and ethnically diverse backgrounds. Projects will also prepare such personnel to support each child with a disability who has high-intensity needs in meeting high expectations and to have meaningful and effective collaborations with other providers, families, and administrators.

For decades, State demand for fully credentialed early intervention and special education personnel to serve children with disabilities has persistently exceeded the available supply (Mason-Williams et al., 2020). The shortages were exacerbated by the COVID-19 pandemic, and public schools report that special education positions are most difficult to fill (National Center for Educational Statistics, 2022). The need for personnel with the knowledge and skills to serve children with disabilities who have high-intensity needs is even greater in the fields of EI, ECSE, BVI, DHH, DB, and APE.

¹ For the purposes of this priority, "high-intensity needs" refers to a complex array of disabilities or the needs of children with these disabilities requiring intensive, individualized intervention(s) (i.e., that are specifically designed to address persistent learning or behavior difficulties, implemented with greater frequency and for an extended duration than is commonly available in a typical classroom or early intervention setting, or which require personnel to have knowledge and skills in identifying and implementing multiple evidence-based interventions).

EI and ECSE are critical services to support young children with disabilities' development and learning, so they can reach their full potential at later ages, including in the school years. According to a recent report (Early Childhood Personnel Center, 2022), EI and ECSE personnel shortages are at a crisis point across States, resulting in inadequate child find activities and waitlists for evaluations and services (Fauth et al., 2023). In addition to widespread challenges related to recruitment and retention of personnel working in EI and ECSE, survey respondents also reported a decline in higher education offerings in EI and ECSE as a serious concern (Early Childhood Personnel Center, 2022).

The shortages of teachers in positions that require highly specialized skills and knowledge, such as teachers of students with BVI, teachers of DHH, and APE teachers, are reported in research and are also well known in the field (American Association for Employment in Education, 2023; Barnett & Huang, 2024; Luft et al., 2022; Ondrasek et al., 2020). Many universities are struggling to maintain their special education preparation programs and the reduced numbers of applicants and budget constraints appear to have more adverse effects on programs that prepare the workforce to serve children with disabilities who have high-intensity needs (Ondrasek et al., 2020).

To effectively serve children with disabilities who have high-intensity needs, personnel require specialized or advanced skills and knowledge to work within a multidisciplinary team, collaboratively design and deliver evidence-based instruction and intensive individualized interventions, and provide instruction and interventions in person and through distance learning technologies in natural environments, classrooms, and schools that address the needs of these individuals (Boe et al., 2013; Browder et al., 2014; McLeskey & Brownell, 2015). Personnel also need leadership skills to strengthen professional practice and cultural and linguistic competencies to effectively deliver services and education for children with disabilities who have high-intensity needs, including children who are multilingual and children who are from racially and ethnically diverse backgrounds.

To enable personnel to provide efficient, high-quality, integrated, and equitable services, both in person and through distance learning technologies, personnel preparation programs need to embed content, practices, and extensive field or clinical experiences that are evidence-based and culturally and

linguistically responsive into preservice training in early intervention settings, early childhood programs, and schools. Therefore, this priority aims to fund high-quality projects that prepare scholars in EI, ECSE, DHH, BVI, DB, or APE at the bachelor's degree, certification, master's degree, or educational specialist degree levels, including multilingual scholars and scholars from racially and ethnically diverse backgrounds, who are fully credentialed to enter the field and serve children with disabilities who have high-intensity needs.

Priority:

The purpose of this priority is to increase the number and improve the quality of personnel, including multilingual personnel and personnel from racially and ethnically diverse backgrounds, who are fully credentialed to serve children who have high-intensity needs² in the fields of EI, ECSE, DHH, BVI, DB, or APE. The priority will fund high-quality projects that prepare scholars³ in EI, ECSE, DHH, BVI, DB, or APE at the bachelor's degree, certification,⁴ master's degree, or educational specialist degree levels for professional practice in natural environments, early childhood programs, classrooms, school settings, and in distance learning environments serving children with disabilities who have high-intensity needs. Projects can propose to prepare scholars in one or

more of the allowable fields of EI, ECSE, DHH, BVI, DB, and APE.

Note: Projects may include individuals who are not funded as scholars, but are in degree programs (e.g., general education, early childhood education, administration) that are cooperating with the grantee's project. These individuals may participate in the coursework, assignments, field or clinical experiences, and other opportunities required of scholars' program of study (e.g., speaker series, monthly seminars) if doing so does not diminish the benefit for project-funded scholars (e.g., by reducing funds available for scholar support or limiting opportunities for scholars to participate in project activities).

Note: Projects that partner with related services⁵ programs to prepare scholars in EI, ECSE, DHH, BVI, DB, or APE can qualify under this priority. In such situations, scholars in the partnering related services degree program (e.g., bachelor's, master's, or clinical doctorate degree) may receive scholar support to complete their related services degree. Degree programs across more than one institution of higher education (IHE) may partner together within a project. Personnel preparation degree programs that prepare all scholars to be dually certified, including dually certified in special education and a related service, can qualify under this priority.

Note: Applicants under this priority may not submit the same proposal under Personnel Preparation of Special Education, Early Intervention, and Related Services Personnel at Historically Black Colleges and Universities, Tribally Controlled Colleges and Universities, and Other Minority Serving Institutions, ALN 84.325M. Applicants may submit substantively different proposals under ALN 84.325K and ALN 84.325M. OSEP will not fund similar personnel preparation projects within the same IHE across the ALN 84.325K and 84.325M competitions.

Prior to enrolling scholars, applicants may use up to \$100,000 of funds in the first budget period and up to the first 12 months of the performance period for project planning, including enhancing an existing program. If an applicant chooses to use up to the first 12 months

for project planning, then the applicant must provide a comprehensive justification for the need for project planning and include the goals, objectives, and intended outcomes of the planning; a description of the proposed activities; and a timeline for the work. The plan may include activities such as—

(1) Developing new and updating current coursework, assignments, or extensive and coordinated field or clinical experiences needed to support preparation for personnel in EI, ECSE, DHH, BVI, DB, or APE, including personnel from groups that are underrepresented in the field, including personnel with disabilities, multilingual personnel, and personnel from racially and ethnically diverse backgrounds, serving children with disabilities who have high-intensity needs;

(2) Building capacity (e.g., hiring a field supervisor, providing professional development for faculty and field supervisors) of the personnel to prepare scholars, including scholars from groups that are underrepresented in the field, including scholars with disabilities, multilingual scholars, and scholars from racially and ethnically diverse backgrounds, to serve children with disabilities with high-intensity needs and their families;

(3) Purchasing needed resources (e.g., additional teaching supplies or specialized equipment to enhance instruction); and

(4) Establishing relationships with early intervention and early childhood programs or schools to serve as sites for field or clinical experiences needed to support the project. These sites may include high-need local educational agencies (LEAs),⁶ high-poverty schools,⁷ schools identified for comprehensive support and improvement,⁸ and schools

² For the purposes of this priority, "high-intensity needs" refers to a complex array of disabilities or the needs of children with these disabilities requiring intensive, individualized intervention(s) (i.e., that are specifically designed to address persistent learning or behavior difficulties, implemented with greater frequency and for an extended duration than is commonly available in a typical classroom or early intervention setting, or which require personnel to have knowledge and skills in identifying and implementing multiple evidence-based interventions).

³ For the purposes of this priority, "scholar" means an individual who: (a) is pursuing a bachelor's, certification, master's, or educational specialist degree in early intervention or special education; (b) receives scholarship assistance as authorized under section 662 of IDEA (34 CFR 304.3(g)); (c) will be eligible for a license, endorsement, or certification from a State or national credentialing authority following completion of the degree program identified in the application; and (d) will be able to be employed in a position that serves children with disabilities for a minimum of 51 percent of their time or case load. Individuals pursuing degrees in general education or early childhood education do not qualify as "scholars" eligible for scholarship assistance.

⁴ For the purposes of this priority, "certification" refers to programs of study that lead to State licensure, endorsement, or certification that qualifies graduates to teach or provide services to children with disabilities. Programs of study that lead to a certificate of completion from the institution of higher education, but do not lead to State licensure, endorsement, or certification, do not qualify.

⁵ For the purposes of this priority, "related services" includes: speech-language pathology and audiology services; interpreting services; psychological services; applied behavior analysis; physical therapy and occupational therapy; recreation, including therapeutic recreation; social work services; counseling services, including rehabilitation counseling; and orientation and mobility services.

⁶ For the purposes of this priority, "high-need LEA" means an LEA (a) that serves not fewer than 10,000 children from families with incomes below the poverty line; or (b) for which not less than 20 percent of the children are from families with incomes below the poverty line.

⁷ For the purposes of this priority, "high-poverty school" means a school in which at least 50 percent of students are from low-income families as determined using one of the measures of poverty specified in section 1113(a)(5) of the Elementary and Secondary Education Act of 1965, as amended (ESEA). For middle and high schools, eligibility may be calculated on the basis of comparable data from feeder schools. Eligibility as a high-poverty school under this definition is determined on the basis of the most currently available data.

⁸ For the purposes of this priority, "school implementing a comprehensive support and improvement plan" means a school identified for comprehensive support and improvement by a State under section 1111(c)(4)(D) of the ESEA that includes (a) not less than the lowest performing 5 percent of all schools in the State receiving funds

implementing a targeted support and improvement plan⁹ for children with disabilities; early childhood and early intervention programs located within the geographic boundaries of a high-need LEA; and early childhood and early intervention programs located within the geographical boundaries of an LEA serving the highest percentage of schools identified for comprehensive support and improvement or implementing targeted support and improvement plans in the State.

Federal funds may also be used for scholar support and other grant activities occurring in year one of the project, provided that the total request for year one does not exceed the maximum award available for one budget period of 12 months (*i.e.*, \$350,000).

Note: Applicants proposing projects to develop, expand, or add a new area of emphasis to EI, ECSE, DHH, BVI, DB, or APE programs must provide, in their applications, information on how these new areas will be sustained once Federal funding ends.

Note: Project periods under this priority may be up to 60 months. Projects should be designed to ensure that all proposed scholars successfully complete the program within 60 months from the start of the project. The Secretary may reduce continuation awards for any project in which scholar recruitment is not on track or scholars are not on track to complete the program within the project period. The Department intends to closely monitor unobligated balances and substantial progress under this program and may reduce or discontinue funding accordingly consistent with its authority in 34 CFR 75.253.

To be considered for funding under this absolute priority, all program applicants must meet the requirements contained in this priority.

To meet the requirements of this priority an applicant must—

(a) Demonstrate, in the narrative section of the application under “Significance,” how—

(1) The proposed project will address the need in the proposed preparation

area to prepare personnel who are fully qualified to serve children with disabilities who have high-intensity needs;

(2) The proposed project will increase the number of personnel in the proposed preparation area who demonstrate the competencies¹⁰ needed to—

(i) Promote high expectations and improve outcomes for children with disabilities who have high-intensity needs;

(ii) Differentiate curriculum and instruction;

(iii) Provide intensive, evidence-based¹¹ individualized instruction and interventions in person and through distance learning technologies in a variety of early intervention, early childhood, and school settings (*e.g.*, natural environments; public schools, including charter schools; private schools; and other nonpublic education settings, including home education);

(iv) Provide culturally and linguistically responsive instruction and services;

(v) Collaborate with diverse partners, including multilingual individuals, individuals and families from racially and ethnically diverse backgrounds, and individuals with disabilities, using a multidisciplinary team approach to address the individualized developmental, learning, and academic needs of children with disabilities who have high-intensity needs, and support their successful transitions from early childhood to elementary, elementary to secondary, or transition to postsecondary education and the workforce; and

(vi) Exercise leadership to improve professional practice and services and education for children with disabilities who have high-intensity needs; and

(3) The applicant has successfully graduated students in their program, including students with disabilities, multilingual students, and students who are from racially, and ethnically diverse backgrounds, including data disaggregated by disability status, race, national origin and primary language(s),

and the number of students who have graduated in the last five years.

(b) Demonstrate, in the narrative section of the application under “Quality of project services,” how—

(1) The project will conduct its planning activities, if the applicant will use any of the allowable first 12 months of the project period for planning;

(2) The project will recruit and retain scholars. To meet this requirement, the applicant must describe—

(i) The selection criteria the project will use to identify applicants for admission in the program;

(ii) The specific recruitment strategies the project will use to attract applicants, including from groups that are underrepresented in the field, including applicants with disabilities, multilingual applicants, and applicants from racially and ethnically diverse backgrounds, to ensure a diverse pool of applicants; and

Note: Applicants should engage in focused outreach and recruitment to increase the number of applicants from groups that are traditionally underrepresented in the field, including applicants with disabilities, multilingual applicants, and applicants from racially and ethnically diverse backgrounds, but the selection criteria the applicant intends to use must ensure equal access and treatment of all applicants seeking admission to the program and must be consistent with applicable law, including Federal civil rights law.

(iii) The approach that will be used to mentor and support all scholars, and any specific approaches to supporting scholars from groups that are underrepresented in the field, including individuals with disabilities, multilingual scholars, and scholars from racially and ethnically diverse backgrounds, for retention and completion of the program within the project period and preparing them for careers in early intervention or special education; and

(3) The project will be designed to promote the acquisition of the competencies needed by EI, ECSE, DHH, BVI, DB, or APE personnel to support improved outcomes for children with disabilities with high-intensity needs. To address this requirement, the applicant must—

(i) Describe how the proposed components, such as coursework, field or clinical experiences in EI, ECSE, DHH, BVI, DB, or APE, work-based experiences, or other opportunities provided to scholars, and sequence of the project components will enable the scholars to acquire the competencies needed by personnel working with

under title I, part A of the ESEA; (b) all public high schools in the State failing to graduate one third or more of their students; and (c) public schools in the State described in section 1111(d)(3)(A)(i)(II) of the ESEA.

⁹For the purposes of this priority, “school implementing a targeted support and improvement plan” means a school identified for targeted support and improvement by a State that has developed and is implementing a school-level targeted support and improvement plan to improve student outcomes based on the indicators in the statewide accountability system defined in section 1111(d)(2) of the ESEA.

¹⁰For the purposes of this priority, “competencies” means what a person knows and can do—the knowledge, skills, and dispositions necessary to effectively function in a role (National Professional Development Center on Inclusion, 2011).

¹¹For the purposes of this priority, “evidence-based” means, at a minimum, evidence that demonstrates a rationale (as defined in 34 CFR 77.1), where a key project component (as defined in 34 CFR 77.1) included in the project’s logic model (as defined in 34 CFR 77.1) is informed by research or evaluation findings that suggest the project component is likely to improve relevant outcomes (as defined in 34 CFR 77.1).

children with disabilities with high-intensity needs;

(ii) Describe how the proposed project will reflect current evidence-based practices (EBPs) to prepare scholars to provide effective and equitable evidence-based culturally and linguistically responsive instruction, interventions, and services that improve outcomes for children with disabilities with high-intensity needs, in a variety of educational or early childhood and early intervention settings, including in-person and remote settings; and

(iii) Describe how the proposed project will engage partners, including multilingual individuals and individuals and families from racially and ethnically diverse backgrounds; public or private partnering agencies, schools, or programs; centers or organizations that provide services to children with disabilities and their families; and individuals with disabilities and their families, to inform and support project components.

(c) Demonstrate, in the narrative section of the application under “Quality of the project personnel and management plan,” how—

(1) The project director and other key project personnel are qualified to prepare scholars in the project’s preparation area;

(2) The project director and other key project personnel will manage the components of the project; and

(3) The time commitments of the project director and other key project personnel are adequate to meet the objectives of the proposed project.

(d) Demonstrate, in the narrative section of the application under “Adequacy of resources,” how—

(1) Information regarding the types of accommodations and resources available to fully support scholars’ well-being and a work-life balance (e.g., university and community mental health supports, counseling services, health resources, housing resources, child care) will be disseminated and how the project will support scholars to access those accommodations and resources in a timely basis, if needed, while the scholar is in the program;

(2) The types of accommodations and resources provided to support scholars’ well-being and a work-life balance will be individualized based on scholars’ cultural, academic, health, logistical, financial, and social emotional needs with the goal of supporting them to complete the program; and

(3) The budget is adequate for meeting the project objectives and mitigating financial burden to scholars in completing the program of study.

Note: Scholar support does not need to be uniform for all scholars and should be customized for individual scholars based on scholars’ financial needs, including consideration of all costs associated with the cost of attendance, even if that means enrolling fewer scholars. Scholar support can include support for cost of attendance (*i.e.*, tuition and fees; university student health insurance; an allowance for books, materials, and supplies; an allowance for miscellaneous personal expenses; an allowance for dependent care, such as child care; an allowance for transportation; and/or an allowance for room and board), travel in conjunction with training assignments including conference registration, and stipends to support scholars’ completion of the program and professional development. Projections for scholar support should consider tuition increases and cost of living increases over the project period. Projects that prepare personnel at the bachelor’s degree level cannot provide scholar support during the first two years (*e.g.*, freshman and sophomore years) of the degree program to ensure that scholar support can lead to service obligation fulfillment.

(e) Describe, in the narrative section of the application under “Quality of the project evaluation,” how the applicant will—

(1) Evaluate how well the goals or objectives of the proposed project have been met. To meet this requirement, the applicant must describe—

(i) The outcomes to be measured for both the project and the scholars, particularly the acquisition of scholars’ competencies; and

(ii) The evaluation methodologies, data collection methods, and data analyses that will be used; and

(2) Collect, analyze, and use data on scholars supported by the project to inform the project on an ongoing basis.

(f) Demonstrate, in the appendices or narrative under “Required project assurances” as directed, that the following requirements are met. The applicant must—

(1) Include in Appendix A of the application—

(i) Charts, tables, figures, graphs, screen shots, and visuals that provide information directly relating to the application requirements for the narrative. Appendix A should not be used for supplementary information. Please note that charts, tables, figures, graphs, and screen shots can be single-spaced when placed in Appendix A; and

(ii) A letter of support from a public or private partnering agency, school, or

program, that states it will provide scholars with a field or clinical experience in a high-need LEA, a high-poverty school, a school implementing a comprehensive support and improvement plan, a school implementing a targeted support and improvement plan for children with disabilities, a State educational agency, an early childhood and early intervention program located within the geographical boundaries of a high-need LEA, or an early childhood and early intervention program located within the geographical boundaries of an LEA serving the highest percentage of schools identified for comprehensive support and improvement or implementing targeted support and improvement plans in the State;

(2) Include in Appendix B of the application—

(i) A table that lists the project’s required coursework and includes the course title, brief description, learning goals, and relevant State or national professional organization personnel standards for each course; and

(ii) Four exemplar course syllabi required by the degree program that reflect EBPs across the areas of assessment; social, emotional, and behavior development and learning; inclusive practices; instructional strategies; and literacy, as appropriate;

(3) Include in the application budget attendance by the project director at a three-day project directors’ meeting in Washington, DC, during each year of the project; and

(4) Provide an assurance that—

(i) The project will meet the requirements in 34 CFR 304.23, particularly those related to (A) informing all scholarship recipients of their service obligation commitment; and (B) disbursing scholarships. Failure by a grantee to properly meet these requirements is a violation of the grant award that may result in the grantee being liable for returning any misused funds to the Department;

(ii) The project will meet the statutory requirements in section 662(e) through (h) of IDEA;

(iii) The project will be operated in a manner consistent with nondiscrimination requirements contained in Federal civil rights laws;

(iv) All the syllabi for the project’s required coursework will be provided if requested by OSEP;

(v) At least 65 percent of the total award over the project period (*i.e.*, up to 5 years) will be used for scholar support;

(vi) Scholar support provided by the project is not based on the condition

that the scholar work for the grantee (e.g., personnel at the IHE);

(vii) The project director, key personnel, and scholars will actively participate in learning opportunities (e.g., webinars, briefings) supported by OSEP and intended to promote opportunities for participants to understand reporting requirements, share resources, and generate new knowledge by addressing topics of common interest to participants across projects, including Department priorities and needs in the field;

(viii) The project website, if applicable, will be of high quality, with an easy-to-navigate design that meets government or industry-recognized standards for accessibility;

(ix) Scholar accomplishments (e.g., public service, awards, publications, conference presentations) will be reported in annual and final performance reports; and

(x) Annual data will be submitted on each scholar who receives grant support (OMB Control Number 1820–0686). The primary purposes of the data collection are to track the service obligation fulfillment of scholars who receive funds from OSEP grants and to collect data for program performance measure reporting under 34 CFR 75.110. Data collection includes the submission of a signed, completed pre-scholarship agreement and exit certification for each scholar funded under an OSEP grant (see paragraph (f)(4)(i) of this priority). Applicants are encouraged to visit the Personnel Development Program Data Collection System website at <https://pdp.ed.gov/osep> for further information about this data collection requirement.

Competitive Preference Priority: For FY 2025 and any subsequent year in which we make awards from the list of unfunded applications from this competition, this priority is a competitive preference priority. Under 34 CFR 75.105(c)(2)(i), we award an additional 5 points to an application that meets the competitive preference priority. Applicants should indicate in the abstract if they are addressing the competitive preference priority.

The competitive preference priority is:

Applications from New Potential Grantees (0 or 5 points).

(a) Under this priority, an applicant must demonstrate that the applicant (e.g., the IHE) has not had an active discretionary grant under the ALN 84.325K, 84.325M, or 84.325R, including through membership in a group application submitted in accordance with 24 CFR 75.127–75.129 in the last five years before the deadline

date for submission of applications under this program (ALN 84.325K).

(b) For the purpose of this priority, a grant is active until the end of the grant's project or funding period, including any extensions of those periods that extend the grantee's authority to obligate funds.

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- Waiver of Proposed Rulemaking:** Under the Administrative Procedure Act (APA) (5 U.S.C. 553) the Department generally offers interested parties the opportunity to comment on proposed priorities. Section 681(d) of IDEA, however, makes the public comment requirements of the APA inapplicable to the absolute priority in this notice.
- Program Authority:** 20 U.S.C. 1462 and 1481.
- Note:** Projects will be awarded and must be operated in a manner consistent with the nondiscrimination requirements contained in Federal civil rights laws.
- Applicable Regulations:** (a) The Education Department General Administrative Regulations in 34 CFR parts 75, 77, 79, 81, 82, 84, 86, 97, 98, and 99. (b) The Office of Management and Budget (OMB) Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement) in 2 CFR part 180, as adopted and amended as regulations of the Department in 2 CFR part 3485. (c) The Guidance for Federal Financial Assistance in 2 CFR part 200, as adopted and amended as regulations of the Department in 2 CFR part 3474. (d) The regulations for this program in 34 CFR part 304. (e) The Administrative Priorities.
- Note:** The Department will implement the changes included in the Office of Management and Budget (OMB) final rule, OMB Guidance for Federal Financial Assistance (<https://www.federalregister.gov/documents/2024/04/22/2024-07496/guidance-for-federal-financial-assistance>), formerly called, Office of Management and

Budget Guidance for Grants and Agreements, which amends 2 CFR part 200, on October 1, 2024. Grant applicants who anticipate a performance period start date on or after October 1, 2024, should follow the provisions stated in the updated 2 CFR part 200, when preparing an application. For more information about these updated regulations please visit: <https://www2.ed.gov/policy/fund/guid/uniform-guidance/index.html>. The Department will continue to provide more resources on our web page as they become available.

Note: The regulations in 34 CFR part 86 apply to IHEs only.

II. Award Information

Type of Award: Discretionary grants.
Estimated Available Funds: The Administration requested \$125,000,000 for the Personnel Development to Improve Services and Results for Children with Disabilities program for FY 2025, of which we intend to use an estimated \$3,000,000 for this competition. The actual level of funding, if any, depends on final congressional action. However, we are inviting applications to allow enough time to complete the grant process if Congress appropriates funds for this program.

Contingent upon the availability of funds and the quality of applications, we may make additional awards in FY 2026 from the list of unfunded applications from this competition.

Estimated Range of Awards:

\$200,000–\$350,000 per year.

Estimated Average Size of Awards: \$275,000 per year.

Maximum Award: We will not make an award exceeding \$1,250,000 per project for a project period of 60 months or an award that exceeds \$350,000 for a single budget period of 12 months.

Estimated Number of Awards: 12.

Note: The Department is not bound by any estimates in this notice.

Project Period: Up to 60 months.

III. Eligibility Information

1. *Eligible Applicants:* Eligible applicants are IHEs and private nonprofit organizations that have legal authority to enter into grants and cooperative agreements with the Federal government on behalf of an IHE.

Note: If you are a nonprofit organization, under 34 CFR 75.51, you may demonstrate your nonprofit status by providing: (1) proof that the Internal Revenue Service currently recognizes the applicant as an organization to which contributions are tax deductible under section 501(c)(3) of the Internal Revenue Code; (2) a statement from a

State taxing body or the State attorney general certifying that the organization is a nonprofit organization operating within the State and that no part of its net earnings may lawfully benefit any private shareholder or individual; (3) a certified copy of the applicant's certificate of incorporation or similar document if it clearly establishes the nonprofit status of the applicant; or (4) any item described above if that item applies to a State or national parent organization, together with a statement by the State or parent organization that the applicant is a local nonprofit affiliate.

2. a. *Cost Sharing or Matching:* Cost sharing or matching is not required for this competition.

b. *Indirect Cost Rate Information:* This program uses a training indirect cost rate. This limits indirect cost reimbursement to an entity's actual indirect costs, as determined in its negotiated indirect cost rate agreement, or eight percent of a modified total direct cost base, whichever amount is less. For more information regarding training indirect cost rates, see 34 CFR 75.562. For more information regarding indirect costs, or to obtain a negotiated indirect cost rate, please see www.ed.gov/about/ed-offices/oho#Indirect-Cost-Division.

c. *Administrative Cost Limitation:* This program does not include any program-specific limitation on administrative expenses. All administrative expenses must be reasonable and necessary and conform to Cost Principles described in 2 CFR part 200 subpart E of the Guidance for Federal Financial Assistance.

3. *Subgrantees:* Under 34 CFR 75.708(b) and (c), a grantee under this competition may award subgrants—to directly carry out project activities described in its application—to the following types of entities: IHEs, nonprofit organizations suitable to carry out the activities proposed in the application, and public agencies. The grantee may award subgrants to entities it has identified in an approved application or that it selects through a competition under procedures established by the grantee, consistent with 34 CFR 75.708(b)(2).

4. *Other General Requirements:*

a. Recipients of funding under this competition must make positive efforts to employ and advance in employment qualified individuals with disabilities (see section 606 of IDEA).

b. Applicants for, and recipients of, funding must, with respect to the aspects of their proposed project relating to the absolute priority, involve individuals with disabilities, or parents

of individuals with disabilities ages birth through 26, in planning, implementing, and evaluating the project (see section 682(a)(1)(A) of IDEA).

IV. Application and Submission Information

1. Application Submission

Instructions: Applicants are required to follow the Common Instructions for Applicants to Department of Education Discretionary Grant Programs, published in the **Federal Register** on December 7, 2022 (87 FR 75045) and available at www.federalregister.gov/content/pkg/FR-2022-12-07/pdf/2022-26554.pdf, which contain requirements and information on how to submit an application.

2. *Intergovernmental Review:* This competition is subject to Executive Order 12372 and the regulations in 34 CFR part 79. Information about Intergovernmental Review of Federal Programs under Executive Order 12372 is in the application package for this competition.

3. *Funding Restrictions:* We reference regulations outlining funding restrictions in the *Applicable Regulations* section of this notice.

4. *Recommended Page Limit:* The application narrative is where you, the applicant, address the selection criteria that reviewers use to evaluate your application. We recommend that you (1) limit the application narrative to no more than 40 pages; (2) limit the whole application to no more than 100 pages; and (3) use the following standards:

- A “page” is 8.5” × 11”, on one side only, with 1” margins at the top, bottom, and both sides.

- Double-space (no more than three lines per vertical inch) all text in the application narrative, including titles, headings, footnotes, quotations, reference citations, and captions, as well as all text in charts, tables, figures, graphs, and screen shots.

- Use a font that is 12 point or larger.

- Use one of the following fonts: Times New Roman, Courier, Courier New, or Arial.

The recommended page limit does not apply to the cover sheet; the budget section, including the narrative budget justification; the assurances and certifications; or the abstract (follow the guidance provided in the application package for completing the abstract), the table of contents, the list of priority requirements, the resumes, the reference list, the letters of support, or the appendices. However, the recommended page limit does apply to all of the application narrative,

including all text in charts, tables, figures, graphs, and screen shots.

V. Application Review Information

1. *Selection Criteria:* The selection criteria for this competition are from 34 CFR 75.210 and are as follows:

(a) *Significance (10 points).*

(1) The Secretary considers the significance of the proposed project.

(2) In determining the significance of the proposed project, the Secretary considers the following factors:

(i) The extent to which the proposed project will prepare personnel for fields in which shortages have been demonstrated; and

(ii) The importance or magnitude of the results or outcomes likely to be attained by the proposed project, especially improvements in teaching and student achievement.

(b) *Quality of project services (35 points).*

(1) The Secretary considers the quality of the services to be provided by the proposed project.

(2) In determining the quality of the services to be provided by the proposed project, the Secretary considers the quality and sufficiency of strategies for ensuring equal access and treatment for eligible project participants who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability.

(3) In addition, the Secretary considers the following factors:

(i) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice;

(ii) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services;

(iii) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services; and

(iv) The extent to which the proposed activities constitute a coherent, sustained program of training in the field.

(c) *Quality of project personnel and quality of the management plan (20 points).*

(1) The Secretary considers the quality of the project personnel and the quality of the management plan.

(2) In determining the quality of project personnel, the Secretary considers the extent to which the applicant encourages applications for

employment from persons who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability.

(3) In addition, the Secretary considers the following factors:

(i) The qualifications, including relevant training and experience, of key project personnel;

(ii) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks; and

(iii) The extent to which the time commitments of the project director and principal investigator and other key project personnel are appropriate and adequate to meet the objectives of the proposed project.

(d) *Adequacy of resources (20 points).*

(1) The Secretary considers the adequacy of resources of the proposed project.

(2) In determining the adequacy of resources of the proposed project, the Secretary considers the following factors:

(i) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization; and

(ii) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(e) *Quality of the project evaluation (15 points).*

(1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.

(2) In determining the quality of the evaluation, the Secretary considers the following factors:

(i) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project; and

(ii) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.

2. *Review and Selection Process:* We remind potential applicants that in reviewing applications in any discretionary grant competition, the Secretary may consider, under 34 CFR 75.217(d)(3), the past performance of the applicant in carrying out a previous award, such as the applicant's use of funds, achievement of project objectives, and compliance with grant conditions. The Secretary may also consider whether the applicant failed to

submit a timely performance report or submitted a report of unacceptable quality.

In addition, in making a competitive grant award, the Secretary requires various assurances, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

In the event there are two or more applications with the same final score, and there are insufficient funds to fully support each of these applications, the scores under selection criterion (b) *Quality of project services* will be used as a tiebreaker. If the scores remain tied, then the scores under selection criterion (d) *Adequacy of resources* will be used to break the tie.

3. *Additional Review and Selection*

Process Factors: In the past, the Department has had difficulty finding peer reviewers for certain competitions because so many individuals who are eligible to serve as peer reviewers have conflicts of interest. The standing panel requirements under section 682(b) of IDEA also have placed additional constraints on the availability of reviewers. Therefore, the Department has determined that for some discretionary grant competitions, applications may be separated into two or more groups and ranked and selected for funding within specific groups. This procedure will make it easier for the Department to find peer reviewers by ensuring that greater numbers of individuals who are eligible to serve as reviewers for any particular group of applicants will not have conflicts of interest. It also will increase the quality, independence, and fairness of the review process, while permitting panel members to review applications under discretionary grant competitions for which they also have submitted applications.

4. *Risk Assessment and Specific Conditions:* Consistent with 2 CFR 200.206, before awarding grants under this competition, the Department conducts a review of the risks posed by applicants. Under 2 CFR 200.208, the Secretary may impose specific conditions, and under 2 CFR 3474.10, in appropriate circumstances, high-risk conditions on a grant if the applicant or grantee is not financially stable; has a history of unsatisfactory performance; has a financial or other management system that does not meet the standards in 2 CFR part 200, subpart D; has not fulfilled the conditions of a prior grant; or is otherwise not responsible.

5. *Integrity and Performance System:* If you are selected under this

competition to receive an award that over the course of the project period may exceed the simplified acquisition threshold (currently \$250,000), under 2 CFR 200.206(a)(2) we must make a judgment about your integrity, business ethics, and record of performance under Federal awards—that is, the risk posed by you as an applicant—before we make an award. In doing so, we must consider any information about you that is in the integrity and performance system (currently referred to as the Federal Awardee Performance and Integrity Information System (FAPIS)), accessible through the System for Award Management. You may review and comment on any information about yourself that a Federal agency previously entered and that is currently in FAPIS.

Please note that, if the total value of your currently active grants, cooperative agreements, and procurement contracts from the Federal Government exceeds \$10,000,000, the reporting requirements in 2 CFR part 200, Appendix XII, require you to report certain integrity information to FAPIS semiannually. Please review the requirements in 2 CFR part 200, Appendix XII, if this grant plus all the other Federal funds you receive exceed \$10,000,000.

6. *In General:* In accordance with the Office of Management and Budget's guidance located at 2 CFR part 200, all applicable Federal laws, and relevant Executive guidance, the Department will review and consider applications for funding pursuant to this notice inviting applications in accordance with—

(a) Selecting recipients most likely to be successful in delivering results based on the program objectives through an objective process of evaluating Federal award applications (2 CFR 200.205);

(b) Prohibiting the purchase of certain telecommunication and video surveillance services or equipment in alignment with section 889 of the National Defense Authorization Act of 2019 (Pub. L. 115–232) (2 CFR 200.216);

(c) Providing a preference, to the extent permitted by law, to maximize use of goods, products, and materials produced in the United States (2 CFR 200.322); and

(d) Terminating agreements in whole or in part to the greatest extent authorized by law if an award no longer effectuates the program goals or agency priorities (2 CFR 200.340).

VI. Award Administration Information

1. *Award Notices:* If your application is successful, we notify your U.S. Representative and U.S. Senators and send you a Grant Award Notification

(GAN), or we may send you an email containing a link to access an electronic version of your GAN. We also may notify you informally.

If your application is not evaluated or not selected for funding, we notify you.

2. *Administrative and National Policy Requirements:* We identify administrative and national policy requirements in the application package and reference these and other requirements in the *Applicable Regulations* section of this notice.

We reference the regulations outlining the terms and conditions of an award in the *Applicable Regulations* section of this notice and include these and other specific conditions in the GAN. The GAN also incorporates your approved application as part of your binding commitments under the grant.

3. *Open Licensing Requirements:* Unless an exception applies, if you are awarded a grant under this competition, you will be required to openly license to the public grant deliverables created in whole, or in part, with Department grant funds. When the deliverable consists of modifications to pre-existing works, the license extends only to those modifications that can be separately identified and only to the extent that open licensing is permitted under the terms of any licenses or other legal restrictions on the use of pre-existing works. Additionally, a grantee that is awarded competitive grant funds must have a plan to disseminate these public grant deliverables. This dissemination plan can be developed and submitted after your application has been reviewed and selected for funding. For additional information on the open licensing requirements please refer to 2 CFR 3474.20.

4. *Reporting:* (a) If you apply for a grant under this competition, you must ensure that you have in place the necessary processes and systems to comply with the reporting requirements in 2 CFR part 170 should you receive funding under the competition. This does not apply if you have an exception under 2 CFR 170.110(b).

(b) At the end of your project period, you must submit a final performance report, including financial information, as directed by the Secretary. If you receive a multiyear award, you must submit an annual performance report that provides the most current performance and financial expenditure information as directed by the Secretary under 34 CFR 75.118. The Secretary may also require more frequent performance reports under 34 CFR 75.720(c). For specific requirements on reporting, please go to www.ed.gov/

fund/grant/apply/appforms/appforms.html.

(c) Under 34 CFR 75.250(b), the Secretary may provide a grantee with additional funding for data collection analysis and reporting. In this case the Secretary establishes a data collection period.

5. *Performance Measures:* For the purposes of Department reporting under 34 CFR 75.110, the Department has established a set of performance measures, including long-term measures, that are designed to yield information on various aspects of the effectiveness and quality of the Personnel Development to Improve Services and Results for Children with Disabilities program. These measures include (1) the percentage of preparation programs that incorporate scientifically based practices or EBPs into their curricula; (2) the percentage of scholars completing the preparation program who are knowledgeable and skilled in EBPs that improve outcomes for children with disabilities; (3) the percentage of scholars who exit the preparation program prior to completion due to poor academic performance; (4) the percentage of scholars completing the preparation program who are working in the area(s) in which they were prepared upon program completion; (5) the Federal cost per scholar who completed the preparation program; (6) the percentage of scholars who completed the preparation program and are employed in high-need districts; and (7) the percentage of scholars who completed the preparation program and who are rated effective by their employers.

In addition, the Department will gather information on the following outcome measures: the number and percentage of scholars proposed by the grantee in their application that were actually enrolled and making satisfactory academic progress in the current academic year; the number and percentage of enrolled scholars who are on track to complete the training program by the end of the project's original grant period; and the percentage of scholars who completed the preparation program and are employed in the field of special education for at least two years.

Grantees may be asked to participate in assessing and providing information on these aspects of program quality.

6. *Continuation Awards:* In making a continuation award under 34 CFR 75.253, the Secretary considers, among other things: whether a grantee has made substantial progress in achieving the goals and objectives of the project; whether the grantee has expended funds

in a manner that is consistent with its approved application and budget; and, if the Secretary has established performance measurement requirements, whether the grantee has made substantial progress in achieving the performance targets in the grantee's approved application.

In making a continuation award, the Secretary also considers whether the grantee is operating in compliance with the assurances in its approved application, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

VII. Other Information

Accessible Format: On request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT**, individuals with disabilities can obtain this document and a copy of the application package in an accessible format. The Department will provide the requestor with an accessible format that may include Rich Text Format (RTF) or text format (txt), a thumb drive, an MP3 file, braille, large print, audiotape, compact disc, or other accessible format.

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. You may access the official edition of the **Federal Register** and the Code of Federal Regulations at www.govinfo.gov. At this site you can view this document, as well as all other Department documents published in the **Federal Register**, in text or Portable Document Format (PDF). To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

You may also access Department documents published in the **Federal Register** by using the article search feature at www.federalregister.gov. Specifically, through the advanced search feature at this site, you can limit your search to documents published by the Department.

Glenna Wright-Gallo,

Assistant Secretary for Special Education and Rehabilitative Services.

[FR Doc. 2024-23033 Filed 10-7-24; 8:45 am]

BILLING CODE 4000-01-P

DEPARTMENT OF EDUCATION

[Docket No.: ED-2024-SCC-0096]

Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Comment Request; Federal Student Aid (FSA) Partner Connect System and User Access Management

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act (PRA) of 1995, the Department is proposing a new information collection request (ICR).

DATES: Interested persons are invited to submit comments on or before November 7, 2024.

ADDRESSES: Written comments and recommendations for proposed information collection requests should be submitted within 30 days of publication of this notice. Click on this link www.reginfo.gov/public/do/PRAMain to access the site. Find this information collection request (ICR) by selecting "Department of Education" under "Currently Under Review," then check the "Only Show ICR for Public Comment" checkbox. Reginfo.gov provides two links to view documents related to this information collection request. Information collection forms and instructions may be found by clicking on the "View Information Collection (IC) List" link. Supporting statements and other supporting documentation may be found by clicking on the "View Supporting Statement and Other Documents" link.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Beth Grebeldinger, (202) 570-8414.

SUPPLEMENTARY INFORMATION: The Department is especially interested in public comment addressing the following issues: (1) is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Federal Student Aid (FSA) Partner Connect System and User Access Management.

OMB Control Number: 1845-NEW.

Type of Review: New ICR.

Respondents/Affected Public: Private Sector; State, Local, and Tribal Governments.

Total Estimated Number of Annual Responses: 48,600.

Total Estimated Number of Annual Burden Hours: 10,196.

Abstract: This is a request for a new information collection. Federal Student Aid (FSA) Partner Connect will be replacing Student Aid internet Gateway (SAIG) Enrollment via fsawebebnroll.ed.gov. SAIG Mailboxes will remain as the access point for electronically transmitting and receiving data. FSA Partner Connect System and User Access Management allows authorized entities, including postsecondary educational institutions, institutional third-party servicers, guaranty agencies and guaranty agency (GA) servicers, Federal Family Education Loan Program (FFELP) lenders and lender servicers, federal loan servicers, and State Higher Education Agencies, to exchange data electronically with the U.S. Department of Education (Department). In order to participate, each entity must enroll for system and service access through FSA Partner Connect (fsapartners.ed.gov). The enrollment process enables the organization enrolling to create new users and select services to receive, submit, view, and/or update student financial aid data online and by batch using Department provided software EDconnect (PC-based software) or TDClient (client software for multiple environments). As authorized by the Higher Education Act of 1965, as amended (HEA); 20 U.S.C. 1070 *et seq.*, and in order to manage the Title IV, HEA assistance programs, the entities listed above may electronically transmit and receive data from the following FSA systems through SAIG Mailboxes by enrolling through FSA Partner Connect: Free Application for Federal Student Aid (FAFSA) Processing System (FPS) Common Origination and Disbursement (COD) System National Student Loan Data System (NSLDS) Online Electronic Cohort Default Rate (eCDR) Appeals Total and Permanent Disability (TPD) System Digital Customer Care (DCC) Customer Relationship Management (CRM) Online Access and Identity Management System (AIMS)

Financial Management System (FMS)

Additionally, entities may request access to eZ-Audit and the U.S. Department of Homeland Security's Systemic Alien Verification Entitlements (SAVE) Program through FSA Partner Connect to manage Title IV, HEA assistance programs.

Dated: October 2, 2024.

Kun Mullan,

PRA Coordinator, Strategic Collections and Clearance, Governance and Strategy Division, Office of Chief Data Officer, Office of Planning, Evaluation and Policy Development.

[FR Doc. 2024-23178 Filed 10-7-24; 8:45 am]

BILLING CODE 4000-01-P

DEPARTMENT OF EDUCATION

[Docket No.: ED-2024-SCC-0126]

Agency Information Collection Activities; Comment Request; Student Assistance General Provisions—Readmission for Servicemembers

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act (PRA) of 1995, the Department is proposing an extension without change of a currently approved information collection request (ICR).

DATES: Interested persons are invited to submit comments on or before December 9, 2024.

ADDRESSES: To access and review all the documents related to the information collection listed in this notice, please use <http://www.regulations.gov> by searching the Docket ID number ED-2024-SCC-0126. Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at <http://www.regulations.gov> by selecting the Docket ID number or via postal mail, commercial delivery, or hand delivery. If the www.regulations.gov site is not available to the public for any reason, the Department will temporarily accept comments at ICDocketMgr@ed.gov. Please include the docket ID number and the title of the information collection request when requesting documents or submitting comments. Please note that comments submitted after the comment period will not be accepted. Written requests for information or comments submitted by postal mail or delivery should be addressed to the Manager of the Strategic Collections and Clearance Governance and Strategy Division, U.S.

Department of Education, 400 Maryland Ave. SW LBJ, Room 4C210, Washington, DC 20202-1200.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Beth Grebeldinger, 202-570-8414.

SUPPLEMENTARY INFORMATION: The Department, in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. The Department is soliciting comments on the proposed information collection request (ICR) that is described below. The Department is especially interested in public comment addressing the following issues: (1) is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Student Assistance General Provisions—Readmission for Servicemembers.

OMB Control Number: 1845-0095.

Type of Review: An extension without change of a currently approved ICR.

Respondents/Affected Public: Individuals and Households; Private Sector; State, Local, and Tribal Governments.

Total Estimated Number of Annual Responses: 4,570.

Total Estimated Number of Annual Burden Hours: 1,531.

Abstract: The Department of Education (the Department) is requesting an extension without change of the current recordkeeping information collection. There has been no change in either the statute as provided by the Higher Education Act of 1965, as amended (HEA) or in the regulations. The regulations identify the requirements under which an institution must readmit servicemembers with the same

academic status they held at the institution when they last attended (or were accepted for attendance). The regulations require institutions to charge readmitted servicemembers, for the first academic year of their return, the same institutional charges they were charged for the academic year during which they left the institution (see section 484C of the HEA).

Dated: October 3, 2024.

Kun Mullan,

PRA Coordinator, Strategic Collections and Clearance, Governance and Strategy Division, Office of Chief Data Officer, Office of Planning, Evaluation and Policy Development.

[FR Doc. 2024-23260 Filed 10-7-24; 8:45 am]

BILLING CODE 4000-01-P

DEPARTMENT OF EDUCATION**Applications for New Awards; Personnel Development To Improve Services and Results for Children With Disabilities—Preparation of Special Education, Early Intervention, and Related Services Leadership Personnel**

AGENCY: Office of Special Education and Rehabilitative Services, Department of Education.

ACTION: Notice.

SUMMARY: The Department of Education (Department) is issuing a notice inviting applications for new awards for fiscal year (FY) 2025 for Personnel Development to Improve Services and Results for Children with Disabilities—Preparation of Special Education, Early Intervention, and Related Services Leadership Personnel.

DATES:

Applications Available: October 8, 2024.

Deadline for Transmittal of Applications: November 22, 2024.

Deadline for Intergovernmental Review: February 5, 2025.

Pre-Application Webinar Information: No later than October 15, 2024, the Office of Special Education and Rehabilitative Services will post pre-recorded informational webinars designed to provide technical assistance to interested applicants. The webinars may be found at www.ed.gov/about/ed-offices/osers/osep/new-osep-grant-competitions.

ADDRESSES: For the addresses for obtaining and submitting an application, please refer to our Common Instructions for Applicants to Department of Education Discretionary Grant Programs, published in the **Federal Register** on December 7, 2022

(87 FR 75045) and available at www.federalregister.gov/documents/2022/12/07/2022-26554/common-instructions-for-applicants-to-department-of-education-discretionary-grant-programs.

FOR FURTHER INFORMATION CONTACT:

Celia Rosenquist, U.S. Department of Education, 400 Maryland Avenue SW, Room 4A10, Washington, DC 20202. Telephone: 202-245-7373. Email: Celia.Rosenquist@ed.gov.

If you are deaf, hard of hearing, or have a speech disability and wish to access telecommunications relay services, please dial 7-1-1.

SUPPLEMENTARY INFORMATION:

Full Text of Announcement

I. Funding Opportunity Description

Purposes of Program: The purposes of this program are to (1) help address State-identified needs for personnel preparation in special education, early intervention, related services, and regular education to work with children, including infants and toddlers, with disabilities; and (2) ensure that those personnel have the necessary skills and knowledge, derived from practices that have been determined through scientifically based research and experience, to be successful in serving those children.

Assistance Listing Number: 84.325D.

OMB Control Number: 1820-0028.

Priorities: This competition includes one absolute priority and two competitive preference priorities. In accordance with 34 CFR 75.105(b)(2)(v), the absolute priority is from allowable activities specified in the statute (see sections 662 and 681 of the Individuals with Disabilities Education Act (IDEA); 20 U.S.C. 1462 and 1481). Competitive Preference Priority 1 is from the Administrative Priorities for Discretionary Grants Programs published in the **Federal Register** on March 9, 2020 (85 FR 13640) (Administrative Priorities), and Competitive Preference Priority 2 is from the Secretary's Supplemental Priorities and Definitions for Discretionary Grants Programs published in the **Federal Register** on December 10, 2021 (86 FR 70612) (Supplemental Priorities).

Absolute Priority: For FY 2025 and any subsequent year in which we make awards from the list of unfunded applications from this competition, this priority is an absolute priority. Under 34 CFR 75.105(c)(3), we consider only applications that meet this priority.

This priority is:

Preparation of Special Education, Early Intervention, and Related Services Leadership Personnel.

Background:

The Department is committed to promoting equity for children with disabilities to access educational resources and opportunities. The Department also places a high priority on increasing the number of leadership personnel, including increasing the number of multilingual leadership personnel and leadership personnel from racially and ethnically diverse backgrounds, who provide, or prepare others to provide, services to children with disabilities. Further, the Department also prioritizes diversity and being inclusive of all eligible applicants, particularly applications from new potential grantees that prepare special education, early intervention, and related services leadership personnel. To support these goals, under this absolute priority, the Department will fund projects that support doctoral degree programs to prepare and increase the number of personnel who are well qualified for, and can act effectively in, leadership positions as researchers and special education/early intervention/related services personnel preparers in institutions of higher education (IHEs), or as leaders in State educational agencies (SEAs), lead agencies (LAs) under Part C of IDEA, local educational agencies (LEAs), early intervention services programs (EIS programs), or schools, including increasing the number of multilingual leadership personnel and leadership personnel from racially and ethnically diverse backgrounds at the doctoral level in special education, early intervention, and related services.

There is a well-documented need for special education, early intervention, and related services leadership personnel who serve critical roles within different settings (Bellamy & Iwaszuk, 2017; National Association of School Psychologists, 2021; NCSI, 2018a; NCSI, 2018b; Robb et al., 2012; Tucker et al., 2020). For example, leadership personnel in IHEs teach practices supported by research to future special education, early intervention, related services, and general education professionals. These leaders also conduct research that increases knowledge of effective interventions and services for children, including infants and toddlers, and youth with disabilities. Another example of a critical leadership role includes special education and early intervention administrators who supervise and evaluate the

implementation of instructional programs to ensure that State or local agencies are meeting the needs of children with disabilities.

Administrators also ensure that schools and programs meet Federal, State, and local requirements for special education, early intervention, and related services.

The need to increase the number of multilingual leadership personnel and leadership personnel from racially and ethnically diverse backgrounds has been recognized due to the significant benefits for both personnel and the children they serve (e.g., Carver-Thomas, 2018; deBettencourt et al., 2016). For example, special education programs at IHEs benefit from multilingual faculty and faculty from racially and ethnically diverse backgrounds who bring different perspectives, experiences, and contexts to the program and its design, which, in turn, benefits the individuals enrolled in the program and the children with disabilities those individuals will ultimately serve (e.g., deBettencourt, et al., 2016; Maggin et al., 2021). A multilingual faculty and faculty from racially and ethnically diverse backgrounds also brings different perspectives, experiences, and contexts to research, which is critical to promoting innovative advances in knowledge and practice (e.g., Hofstra et al., 2020), including advances in knowledge of effective culturally and linguistically responsive instruction and interventions and services that improve outcomes for children with disabilities. Special education and early intervention administrators have a critical role in increasing the number of multilingual personnel and personnel from racially and ethnically diverse backgrounds who support children with disabilities through policies, initiatives, and promoting an inclusive culture in early intervention and school settings (e.g., Carver-Thomas, 2018; Steiner et al., 2022) as well as retaining personnel. Administrators also ensure that schools and programs implement culturally and linguistically responsive instructional programs to ensure that State or local agencies are meeting the needs of children with disabilities (Bellamy et al., 2014).

Leadership personnel can have significant influence in preparing and supporting personnel, policy, and research. All leadership personnel need to promote high expectations and have current knowledge of effective culturally and linguistically responsive instruction, interventions, and services that improve outcomes for children with disabilities. Critical competencies for

special education, early intervention, and related services leadership personnel vary depending on the type of leadership personnel and the requirements of the preparation program, but can include, for example, skills needed for postsecondary instruction, administration and supervision, interpreting and applying research, policy development and implementation, organizational and systems change, communication, collaboration, and the use of technologies to support in-person and distance education (Boscardin & Lashley, 2018; Bruns et al., 2017; McCorkle et al., 2023). Scholars' acquisition of competencies and success in doctoral programs depend on factors such as mentoring, supportive supervision, experiential learning opportunities, access to resources, and developing and enhancing professional networks and collaborative learning opportunities (Douglas, 2020; McCorkle et al., 2023; Sverdlik et al., 2018). Networks, in particular, are integral to leadership development and critical to addressing complex problems (Cullen-Lester et al., 2017; Hoppe & Reinelt, 2010).

Priority:

The purpose of this priority is to support doctoral degree programs to prepare and increase the number of personnel who are well-qualified for, and can act effectively in, leadership positions as researchers and special education/early intervention/related services personnel preparers in IHEs, or as leaders in SEAs, LAs under Part C of IDEA, LEAs, or EIS programs, including increasing the number of multilingual leadership personnel and leadership personnel from racially and ethnically diverse backgrounds at the doctoral level in special education, early intervention, and related services. Proposed projects must be designed to prepare graduates to be well-qualified for, and act effectively in, leadership positions as researchers and special education/early intervention/related services personnel preparers in IHEs, or as leaders in SEAs, LAs, LEAs, or EIS programs. Projects must support a program that culminates in a doctoral degree (Ph.D. or Ed.D.).

Note: Eligible applicants include partnerships¹ that are comprised of two

or three IHEs with doctoral programs that prepare scholars² and otherwise meet the eligibility requirements. For additional information regarding group applications, refer to 34 CFR 75.127, 75.128, and 75.129.

Note: Project periods under this priority may be up to 60 months. Projects should be designed to ensure that all proposed scholars successfully complete the program within 60 months from the start of the project. The Secretary may reduce continuation awards for any project in which scholars are not on track to complete the program by the end of that period.

To be considered for funding under this absolute priority, applicants must meet the application requirements contained in the priority. All projects funded under this absolute priority also must meet the programmatic and administrative requirements specified in the priority.

Note: Preparation programs that lead to clinical doctoral degrees in related services (e.g., a Doctor of Audiology degree or Doctor of Physical Therapy degree) are not included in this priority. These types of preparation programs are eligible to apply for funding under the Personnel Preparation of Special Education, Early Intervention, and Related Services Personnel at Historically Black Colleges and Universities, Tribally Controlled Colleges and Universities, and other Minority Serving Institutions priority (84.325M) that the Office of Special Education Programs (OSEP) intends to fund in FY 2025.

To meet the requirements of this priority, an applicant must—

(a) Demonstrate, in the narrative section of the application under “Significance,” how—

(1) The proposed project would increase the number of leadership personnel who are well qualified to advance practice, policy, or research in the project's preparation focus area and how it will provide, or prepare others to provide, effective culturally and linguistically responsive instruction, interventions, and services that improve outcomes for children with disabilities;

(2) The doctoral program to date has been successful (including program

data, if available) in producing leadership personnel. Applicants should include data for the number of students who have completed the doctoral program disaggregated by race, national origin and primary language(s), and disability status; the types of leadership positions that recent program graduates are employed in related to their preparation; the professional accomplishments of program graduates that demonstrate their leadership in special education, early intervention, or related services (e.g., public service, awards, publications); and the percentage of program graduates finding employment related to their preparation serving students with disabilities in underserved communities if applicable (e.g., employed in districts with high rates of poverty); and

Note: Data on the success of a doctoral program should be no more than 5 years old on the start date of the project proposed in the application. When reporting percentages, the denominator (i.e., the total number of scholars or program graduates) must be provided.

(3) Scholar competencies to be acquired in the program relate to knowledge and skills needed by the leadership personnel in the project's proposed preparation focus area to provide, or prepare others to provide, effective culturally and linguistically responsive instruction, interventions, and services, including through distance education, that improve outcomes for children with disabilities.

(b) Demonstrate, in the narrative section of the application under “Quality of project services,” how—

(1) The applicant will recruit and retain scholars participating in the project. To meet this requirement, the narrative must describe—

(i) The selection criteria the applicant will use to identify doctoral applicants for admission to the program;

Note: Doctoral applicants admitted to the program must be newly enrolled in the doctoral training program within the proposed project's preparation focus area;

(ii) The recruitment strategies the project will use to attract doctoral applicants, including from groups that are underrepresented in the field, including applicants with disabilities, multilingual applicants, and applicants from racially and ethnically diverse backgrounds, to ensure a diverse pool of applicants; and

Note: Applicants should engage in focused outreach and recruitment to increase the number of doctoral applicants from groups that are underrepresented in the field, including applicants with disabilities,

¹ For the purposes of this priority, a “partnership” is a group comprised of two or three IHEs with doctoral programs in which (a) each IHE enrolls and supports scholars as part of the partnership, and (b) the partnership provides joint experiences each year for scholars to learn from faculty and scholars at each participating IHE that promote the acquisition of leadership competencies through coursework, research, internship

experiences, work-based experiences, or other opportunities as a requirement of the project.

² For the purposes of this priority, “scholar” is limited to an individual who (a) is pursuing a doctoral degree related to special education, early intervention, or related services; (b) receives scholarship assistance as authorized under section 662 of IDEA (34 CFR 304.3(g)); and (c) will be able to be employed in a position that serves children with disabilities for at least 51 percent of their time or case load. See <https://pdp.ed.gov/OSEP/Home/Regulation> for more information.

multilingual applicants, and applicants from racially and ethnically diverse backgrounds, but the scholar selection criteria the applicant intends to use must ensure equal access and treatment of all applicants seeking admission to the program and must be consistent with applicable law, including Federal civil rights laws.

(iii) The approach that will be used to mentor and support all scholars in completing the program and preparing them for careers in special education, early intervention, or related services; and

(2) The project is designed to promote the acquisition of the competencies needed by leadership personnel in the project's proposed preparation focus area to provide, or prepare others to provide, effective culturally and linguistically responsive instruction, interventions, and services that improve outcomes for children with disabilities. To address this requirement, the applicant must describe how—

(i) The proposed project components, such as coursework, research, internship experiences, work-based experiences, program evaluation, and other opportunities provided to scholars, and sequence of the components will enable the scholars to acquire the competencies needed by leadership personnel;

Note: Applicants that propose partnership projects must describe how the project components and sequence of the components are designed to ensure that scholars have opportunities to acquire the competencies needed by leadership personnel through engaging and collaborating with faculty and scholars at each IHE participating in the partnership.

(ii) The proposed project components will prepare scholars to provide, or prepare others to provide, culturally and linguistically responsive effective instruction, interventions, and services that improve outcomes for children with disabilities, in a variety of educational or early childhood and early intervention settings, including in-person and remote settings;

(iii) The proposed project will engage partners, including multilingual individuals, individuals and families from racially and ethnically diverse backgrounds, public or private entities (e.g., organizations, centers, agencies, schools, programs) that provide services to multilingual children with disabilities and their families, and public or private entities that provide services to children of color with disabilities and their families, to inform project components; and

(iv) The proposed project components will promote the acquisition of scholars' knowledge of strategies and approaches in attracting, preparing, and retaining future personnel with disabilities, multilingual personnel and personnel from racially and ethnically diverse backgrounds, who will work with, and provide effective culturally and linguistically responsive instruction, interventions, and services to, children with disabilities and their families.

(c) Demonstrate, in the narrative section of the application under "Quality of the Project Personnel and Management Plan," how—

(1) The project director and other key project personnel are qualified to prepare scholars in the project's preparation focus area;

(2) The project director and other key project personnel will manage the components of the project;

(3) The time commitments of the project director and other key project personnel are adequate to meet the objectives of the proposed project; and

(4) For proposed partnership projects, the project will establish policies, procedures, standards, and fiscal management of the partnership.

(d) Demonstrate, in the narrative section of the application under "Adequacy of resources," how—

(1) Information regarding the types of accommodations and resources available to fully support scholars' well-being and a work-life balance (e.g., university and community mental health supports, counseling services, health resources, housing resources, childcare) will be disseminated and how the project will support scholars accessing those accommodations and resources on a timely basis, if needed, while the scholar is in the project;

(2) The types of accommodations and resources provided to support scholars' well-being and a work-life balance will be individualized based on scholars' cultural, academic, and social emotional needs with the goal of supporting them to complete the program; and

(3) The budget is adequate for meeting the project objectives and mitigating financial burden to scholars while completing the program of study.

Note: Scholar support does not need to be uniform for all scholars and should be customized for individual scholars based on the scholar's financial needs, including a consideration of all costs associated with the attendance, even if that means enrolling fewer scholars as part of the proposed project. Scholar support can include support for cost of attendance (i.e., tuition and fees; university student health insurance; an allowance for books, materials, and

supplies; an allowance for miscellaneous personal expenses; an allowance for dependent care, such as childcare; an allowance for transportation; and an allowance for room and board), travel in conjunction with training assignments, including conference registration, and stipends to support scholars' completion of the program and professional development. Projections for scholar support should consider tuition increases and cost of living increases over the project period.

(e) Demonstrate, in the narrative section of the application under "Quality of the project evaluation," how the applicant will—

(1) Evaluate how well the goals or objectives of the proposed leadership project have been met. The applicant must describe the outcomes to be measured for both the project and the scholars, particularly the acquisition of scholars' competencies, and the evaluation methodologies to be employed, data collection methods, and possible analyses; and

(2) Collect, analyze, and use data on scholars supported by the project to inform the proposed project on an ongoing basis.

(f) Demonstrate, in the appendices or narrative under "Required project assurances" as directed, that the following requirements are met. The applicant must—

(1) Include, in Appendix A of the application—

(i) Charts, tables, figures, graphs, screen shots, and visuals that provide information directly relating to the application requirements for the narrative. Appendix A should not be used for supplementary information. Please note that charts, tables, figures, graphs, and screen shots can be single-spaced when placed in Appendix A; and

(ii) A letter of support from a public or private partnering agency, school, or program, that states it will provide scholars with a field or clinic experience in a high-need LEA,³ a high-poverty school,⁴ a school implementing

³ For the purposes of this priority, "high-need LEA" means an LEA (a) that serves not fewer than 10,000 children from families with incomes below the poverty line; or (b) for which not less than 20 percent of the children are from families with incomes below the poverty line.

⁴ For the purposes of this priority, "high-poverty school" means a school in which at least 50 percent of students are from low-income families as determined using one of the measures of poverty specified in section 1113(a)(5) of the Elementary and Secondary Education Act of 1965, as amended (ESEA). For middle and high schools, eligibility may be calculated on the basis of comparable data from feeder schools. Eligibility as a high-poverty school under this definition is determined on the basis of the most currently available data.

a comprehensive support and improvement plan,⁵ a school implementing a targeted support and improvement plan⁶ for children with disabilities, an SEA, an early childhood and early intervention program located within the geographical boundaries of a high-need LEA, or an early childhood and early intervention program located within the geographical boundaries of an LEA serving the highest percentage of schools identified for comprehensive support and improvement or implementing targeted support and improvement plans in the State;

(2) Include in Appendix B of the application—

(i) A table that includes the project's required coursework that provides the title, description, and learning goals; and

(ii) Four exemplars of course syllabi in research methods, evaluation methods, or data analysis courses required by the degree program;

Note: Partnership projects should include two course syllabi from each participating IHE.

(3) Include in the application budget attendance by the project director at a 3-day project directors' meeting in Washington, DC, during each year of the project. The budget may also provide for the attendance of scholars at the same 3-day project directors' meetings in Washington, DC; and

(4) Provide an assurance that—

(i) The project will meet the requirements in 34 CFR 304.23, particularly those related to (A) informing all scholarship recipients of their service obligation commitment; and (B) disbursing scholarships. Failure by a grantee to properly meet these requirements is a violation of the grant award that may result in the grantee being liable for returning any misused funds to the Department;

(ii) The project will meet the statutory requirements in section 662(e) through (h) of IDEA;

(iii) The project will be operated in a manner consistent with nondiscrimination requirements contained in the U.S. Constitution and Federal civil rights laws;

(iv) All the syllabi for the project's required coursework will be provided if requested by OSEP;

(v) At least 65 percent of the total award over the project period (*i.e.*, up to 5 years) will be used for scholar support;

(vi) Scholar support provided by the project (*i.e.*, tuition and fees; university student health insurance; an allowance for books, materials, and supplies; an allowance for miscellaneous personal expenses; an allowance for dependent care, such as childcare; an allowance for transportation; and an allowance for room and board), travel in conjunction with training assignments, including conference registration, and stipends to support scholars' completion of the program and professional development will not be conditioned on the scholar working for the grantee (*e.g.*, personnel at the IHE);

(vii) The project director, key personnel, and scholars will actively participate in the cross-project collaboration, advanced trainings, and cross-site learning opportunities (*e.g.*, webinars, briefings) supported by OSEP. This network is intended to promote opportunities for participants to share resources and generate new knowledge by addressing topics of common interest to participants across projects including Department priorities and needs in the field;

(viii) The project website, if applicable, will be of high quality, with an easy-to-navigate design that meets government or industry-recognized standards for accessibility;

(ix) Scholar accomplishments (*e.g.*, public service, awards, publications) will be reported in annual and final performance reports; and

(x) Annual data will be submitted on each scholar who receives grant support (OMB Control Number 1820–0686). The primary purposes of the data collection are to track the service obligation fulfillment of scholars who receive funds from OSEP grants and to collect data for program performance measure reporting under 34 CFR 75.110. Data collection includes the submission of a signed, completed pre-scholarship agreement and exit certification for each scholar funded under an OSEP grant (see paragraph (f)(4)(i) of this priority). Applicants are encouraged to visit the Personnel Development Program Data Collection System (DCS) website at <https://pdp.ed.gov/osep> for further

information about this data collection requirement.

Competitive Preference Priorities: For FY 2025 and any subsequent year in which we make awards from the list of unfunded applications from this competition, these priorities are competitive preference priorities. Under 34 CFR 75.105(c)(2)(i), we award an additional 5 points to an application that meets the Competitive Preference Priority 1 and an additional 3 points to an application that meets Competitive Preference Priority 2.

Applicants should indicate in the abstract if the competitive preference priorities are addressed, and which competitive preference priorities are being addressed.

The competitive preference priorities are:

Competitive Preference Priority 1: Applications from New Potential Grantees (0 or 5 points).

(a) Under this priority, an applicant must demonstrate that the applicant (*i.e.*, the IHE) has not had an active discretionary grant under the ALN 84.325D or 84.325H, including through membership in a group application submitted in accordance with 34 CFR 75.127–75.129, in the last 5 years before the deadline date for submission of applications under ALN 84.325D.

(b) For the purposes of this priority, a grant or contract is active until the end of the grant's or contract's project or funding period, including any extensions of those periods that extend the grantee's or contractor's authority to obligate funds.

Competitive Preference Priority 2: Promoting Equity in Student Access to Educational Resources and Opportunities (0 or 3 points).

Under this priority, an applicant must demonstrate the project will be implemented by or in partnership with one or both of the following entities:

(a) Historically Black Colleges and Universities.⁷

(b) Minority-serving institutions.⁸

References

Bellamy, G.T., Crockett, J.B., & Nordengren, C. (2014). *Preparing school leaders for*

⁷ For the purposes of this priority, "Historically Black Colleges and Universities" means colleges and universities that meet the criteria in 34 CFR 608.2.

⁸ For purposes of this priority, "Minority-Serving Institution" means an institution that is eligible to receive assistance under sections 316 through 320 of part A of title III, under part B of title III, or under title V of the Higher Education Act of 1965. For purposes of this priority, the Department will use the FY 2024 Eligibility Matrix to determine MSI eligibility (see www.ed.gov/grants-and-programs/grants-higher-education/eligibility-designations-higher-education-programs).

⁵ For the purposes of this priority, "school implementing a comprehensive support and improvement plan" means a school identified for comprehensive support and improvement by a State under section 1111(c)(4)(D) of the ESEA that includes (a) not less than the lowest performing 5 percent of all schools in the State receiving funds under title I, part A of the ESEA; (b) all public high schools in the State failing to graduate one third or more of their students; and (c) public schools in the State described in section 1111(d)(3)(A)(i)(II) of the ESEA.

⁶ For the purposes of this priority, "school implementing a targeted support and improvement plan" means a school identified for targeted support and improvement by a State that has developed and is implementing a school-level targeted support and improvement plan to improve student outcomes based on the indicators in the statewide accountability system as defined in section 1111(d)(2) of the ESEA.

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- Waiver of Proposed Rulemaking:** Under the Administrative Procedure Act (APA) (5 U.S.C. 553) the Department generally offers interested parties the opportunity to comment on proposed priorities. Section 681(d) of IDEA, however, makes the public comment requirements of the APA inapplicable to the absolute priority in this notice.
- Program Authority:** 20 U.S.C. 1462 and 1481.
- Note:** Projects will be awarded and must be operated in a manner consistent with the nondiscrimination requirements contained in Federal civil rights laws.
- Applicable Regulations:** (a) The Education Department General Administrative Regulations in 34 CFR parts 75, 77, 79, 81, 82, 84, 86, 97, 98, and 99. (b) The Office of Management and Budget (OMB) Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement) in 2 CFR part 180, as adopted and amended as regulations of the Department in 2 CFR part 3485. (c) The Guidance for Federal Financial Assistance in 2 CFR part 200, as adopted and amended as regulations of the Department in 2 CFR part 3474. (d) The regulations for this program in 34 CFR part 304. (e) The Administrative Priorities. (f) The Supplemental Priorities.
- Note:** The Department will implement the changes included in the Office of Management and Budget (OMB) final rule, OMB Guidance for Federal Financial Assistance (<https://www.federalregister.gov/documents/2024/04/22/2024-07496/guidance-for-federal-financial-assistance>), formerly called, Office of Management and Budget Guidance for Grants and Agreements, which amends 2 CFR part 200, on October 1, 2024. Grant applicants who anticipate a performance period start date on or after October 1, 2024, should follow the provisions stated in the updated 2 CFR part 200, when preparing an application. For more information about these updated regulations please visit: <https://www2.ed.gov/policy/fund/guid/uniform-guidance/index.html>. The Department will continue to provide more resources on our web page as they become available.
- Note:** The regulations in 34 CFR part 86 apply to IHEs only.

II. Award Information

Type of Award: Discretionary grants.

Estimated Available Funds: The Administration has requested \$125,000,000 for the Personnel Development to Improve Services and Results for Children with Disabilities program for FY 2025, of which we intend to use an estimated \$3,000,000 for this competition. The actual level of funding, if any, depends on final congressional action. However, we are inviting applications to allow enough time to complete the grant process if Congress appropriates funds for this program.

Contingent upon the availability of funds and the quality of applications, we may make additional awards in FY 2026 from the list of unfunded applications from this competition.

Estimated Range of Awards: \$1,150,000–\$1,250,000 for an individual

IHE; \$2,300,000–\$2,500,000 for a two-IHE partnership application; and \$3,450,000–\$3,750,000 for a three-IHE partnership application.

Estimated Average Size of Awards: \$1,200,000 for an individual IHE; \$2,400,000 for a two-IHE group application; and \$3,600,000 for a three-IHE group application.

Maximum Award: We will not make an award exceeding: \$1,250,000 per project for a project period of 60 months or an award that exceeds \$350,000 for any single budget period of 12 months for an individual IHE; \$2,500,000 per project for a project period of 60 months or an award that exceeds \$700,000 for any single budget period of 12 months for a two-IHE group application; and \$3,750,000 per project for a project period of 60 months or an award that exceeds \$1,050,000 for any single budget period of 12 months for a three-IHE group application.

Note: Applicants must describe, in their applications, the amount of funding being requested for each 12-month budget period.

Estimated Number of Awards: Up to 12 awards for individual IHEs. However, the total number of awards may change depending on the number of group application awards.

Note: The Department is not bound by any estimates in this notice.

Project Period: Up to 60 months.

III. Eligibility Information

1. *Eligible Applicants:* IHEs and private nonprofit organizations.

Note: To meet the absolute priority, eligible applicants (*i.e.*, IHEs) must have a doctoral degree program that prepares scholars in special education, early intervention, or related services or be a nonprofit organization that has the legal authority to enter into grants and cooperative agreements with the Federal government on behalf of an applicant (*i.e.*, IHE) that has a doctoral degree program that prepares scholars in special education, early intervention, or related services.

Note: If you are a nonprofit organization, under 34 CFR 75.51, you may demonstrate your nonprofit status by providing: (1) proof that the Internal Revenue Service currently recognizes the applicant as an organization to which contributions are tax deductible under section 501(c)(3) of the Internal Revenue Code; (2) a statement from a State taxing body or the State attorney general certifying that the organization is a nonprofit organization operating within the State and that no part of its net earnings may lawfully benefit any private shareholder or individual; (3) a certified copy of the applicant's

certificate of incorporation or similar document if it clearly establishes the nonprofit status of the applicant; or (4) any item described above if that item applies to a State or national parent organization, together with a statement by the State or parent organization that the applicant is a local nonprofit affiliate.

2. a. *Cost Sharing or Matching:* This competition does not require cost sharing or matching.

b. *Indirect Cost Rate Information:* This program uses a training indirect cost rate. This limits indirect cost reimbursement to an entity's actual indirect costs, as determined in its negotiated indirect cost rate agreement, or 8 percent of a modified total direct cost base, whichever amount is less. For more information regarding training indirect cost rates, see 34 CFR 75.562. For more information regarding indirect costs, or to obtain a negotiated indirect cost rate, please see www.ed.gov/about/ed-offices/fo#Indirect-Cost-Division.

c. *Administrative Cost Limitation:* This program does not include any program-specific limitation on administrative expenses. All administrative expenses must be reasonable and necessary and conform to Cost Principles described in 2 CFR part 200 subpart E of the Guidance for Federal Financial Assistance.

3. *Subgrantees:* Under 34 CFR 75.708(b) and (c) a grantee under this competition may award subgrants—to directly carry out project activities described in its application—to the following types of entities: IHEs and private nonprofit organizations. The grantee may award subgrants to entities it has identified in an approved application or that it selects through a competition under procedures established by the grantee, consistent with 34 CFR 75.708(b)(2).

4. *Other General Requirements:*
a. Recipients of funding under this competition must make positive efforts to employ and advance in employment qualified individuals with disabilities (see section 606 of IDEA).

b. Applicants for, and recipients of, funding must, with respect to the aspects of their proposed projects relating to the absolute priority, involve individuals with disabilities, or parents of individuals with disabilities ages birth through 26, in planning, implementing, and evaluating the project (see section 682(a)(1)(A) of IDEA).

IV. Application and Submission Information

1. *Application Submission Instructions:* Applicants are required to

follow the Common Instructions for Applicants to Department of Education Discretionary Grant Programs, published in the **Federal Register** on December 7, 2022 (87 FR 75045) and available at www.federalregister.gov/documents/2022/12/07/2022-26554/common-instructions-for-applicants-to-department-of-education-discretionary-grant-programs, which contain requirements and information on how to submit an application.

2. *Intergovernmental Review:* This competition is subject to Executive Order 12372 and the regulations in 34 CFR part 79. Information about Intergovernmental Review of Federal Programs under Executive Order 12372 is in the application package for this competition.

3. *Funding Restrictions:* We reference regulations outlining funding restrictions in the *Applicable Regulations* section of this notice.

4. *Recommended Page Limit:* The application narrative is where you, the applicant, address the selection criteria that reviewers use to evaluate your application. We recommend that you (1) limit the application narrative to no more than 40 pages; (2) limit the whole application to no more than 100 pages; and (3) use the following standards:

- A “page” is 8.5” x 11”, on one side only, with 1” margins at the top, bottom, and both sides.

- Double-space (no more than three lines per vertical inch) all text in the application narrative, including titles, headings, footnotes, quotations, reference citations, and captions, as well as all text in charts, tables, figures, graphs, and screen shots.

- Use a font that is 12 point or larger.

- Use one of the following fonts: Times New Roman, Courier, Courier New, or Arial.

The recommended page limit does not apply to the cover sheet; the budget section, including the narrative budget justification; the assurances and certifications; or the abstract (follow the guidance provided in the application package for completing the abstract), the table of contents, the list of priority requirements, the resumes, the reference list, the letters of support, or the appendices. However, the recommended page limit does apply to all of the application narrative, including all text in charts, tables, figures, graphs, and screen shots.

V. Application Review Information

1. *Selection Criteria:* The selection criteria for this competition are from 34 CFR 75.210 and are as follows:

(a) *Significance (10 points).*

(1) The Secretary considers the significance of the proposed project.

(2) In determining the significance of the proposed project, the Secretary considers the following factors:

(i) The extent to which the proposed project will prepare personnel for fields in which shortages have been demonstrated; and

(ii) The importance or magnitude of the results or outcomes likely to be attained by the proposed project, especially improvements in teaching and student achievement.

(b) *Quality of project services (35 points).*

(1) The Secretary considers the quality of the services to be provided by the proposed project.

(2) In determining the quality of the services to be provided by the proposed project, the Secretary considers the quality and sufficiency of strategies for ensuring equal access and treatment for eligible project participants who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability.

(3) In addition, the Secretary considers the following factors:

(i) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice;

(ii) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services;

(iii) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services; and

(iv) The extent to which the proposed activities constitute a coherent, sustained program of training in the field.

(c) *Quality of project personnel and quality of the management plan (20 points).*

(1) The Secretary considers the quality of the project personnel and the quality of the management plan for the proposed project.

(2) In determining the quality of project personnel, the Secretary considers the extent to which the applicant encourages applications for employment from persons who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability.

(3) In addition, the Secretary considers the following factors:

(i) The qualifications, including relevant training and experience, of key project personnel;

(ii) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks; and

(iii) The extent to which the time commitments of the project director and principal investigator and other key project personnel are appropriate and adequate to meet the objectives of the proposed project.

(d) *Adequacy of resources (20 points).*

(1) The Secretary considers the adequacy of resources of the proposed project.

(2) In determining the adequacy of resources of the proposed project, the Secretary considers the following factors:

(i) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization; and

(ii) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(e) *Quality of the project evaluation (15 points).*

(1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.

(2) In determining the quality of the evaluation, the Secretary considers the following factors:

(i) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project; and

(ii) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.

2. *Review and Selection Process:* We remind potential applicants that in reviewing applications in any discretionary grant competition, the Secretary may consider, under 34 CFR 75.217(d)(3), the past performance of the applicant in carrying out a previous award, such as the applicant's use of funds, achievement of project objectives, and compliance with grant conditions. The Secretary may also consider whether the applicant failed to submit a timely performance report or submitted a report of unacceptable quality.

In addition, in making a competitive grant award, the Secretary requires various assurances, including those applicable to Federal civil rights laws

that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

In the event there are two or more applications with the same final score, and there are insufficient funds to fully support each of these applications, the scores under selection criterion (b) *Quality of project services* will be used as a tiebreaker. If the scores remain tied, then the scores under selection criterion (d) *Adequacy of resources* will be used to break the tie.

3. *Additional Review and Selection Process Factors:* In the past, the Department has had difficulty finding peer reviewers for certain competitions because so many individuals who are eligible to serve as peer reviewers have conflicts of interest. The standing panel requirements under section 682(b) of IDEA also have placed additional constraints on the availability of reviewers. Therefore, the Department has determined that for some discretionary grant competitions, applications may be separated into two or more groups and ranked and selected for funding within specific groups. This procedure will make it easier for the Department to find peer reviewers by ensuring that greater numbers of individuals who are eligible to serve as reviewers for any particular group of applicants will not have conflicts of interest. It also will increase the quality, independence, and fairness of the review process, while permitting panel members to review applications under discretionary grant competitions for which they also have submitted applications.

4. *Risk Assessment and Specific Conditions:* Consistent with 2 CFR 200.206, before awarding grants under this competition the Department conducts a review of the risks posed by applicants. Under 2 CFR 200.208, the Secretary may impose specific conditions, and under 2 CFR 3474.10, in appropriate circumstances, high-risk conditions on a grant if the applicant or grantee is not financially stable; has a history of unsatisfactory performance; has a financial or other management system that does not meet the standards in 2 CFR part 200, subpart D; has not fulfilled the conditions of a prior grant; or is otherwise not responsible.

5. *Integrity and Performance System:* If you are selected under this competition to receive an award that over the course of the project period may exceed the simplified acquisition threshold (currently \$250,000), under 2 CFR 200.206(a)(2) we must make a judgment about your integrity, business ethics, and record of performance under

Federal awards—that is, the risk posed by you as an applicant—before we make an award. In doing so, we must consider any information about you that is in the integrity and performance system (currently referred to as the Federal Awardee Performance and Integrity Information System (FAPIIS)), accessible through the System for Award Management. You may review and comment on any information about yourself that a Federal agency previously entered and that is currently in FAPIIS.

Please note that, if the total value of your currently active grants, cooperative agreements, and procurement contracts from the Federal Government exceeds \$10,000,000, the reporting requirements in 2 CFR part 200, Appendix XII, require you to report certain integrity information to FAPIIS semiannually. Please review the requirements in 2 CFR part 200, Appendix XII, if this grant plus all the other Federal funds you receive exceed \$10,000,000.

6. *In General:* In accordance with the Guidance for Federal Financial Assistance located at 2 CFR part 200, all applicable Federal laws, and relevant Executive guidance, the Department will review and consider applications for funding pursuant to this notice inviting applications in accordance with—

(a) Selecting recipients most likely to be successful in delivering results based on the program objectives through an objective process of evaluating Federal award applications (2 CFR 200.205);

(b) Prohibiting the purchase of certain telecommunication and video surveillance services or equipment in alignment with section 889 of the National Defense Authorization Act of 2019 (Pub. L. 115–232) (2 CFR 200.216);

(c) Providing a preference, to the extent permitted by law, to maximize use of goods, products, and materials produced in the United States (2 CFR 200.322); and

(d) Terminating agreements in whole or in part to the greatest extent authorized by law if an award no longer effectuates the program goals or agency priorities (2 CFR 200.340).

VI. Award Administration Information

1. *Award Notices:* If your application is successful, we notify your U.S. Representative and U.S. Senators and send you a Grant Award Notification (GAN); or we may send you an email containing a link to access an electronic version of your GAN. We also may notify you informally.

If your application is not evaluated or not selected for funding, we notify you.

2. *Administrative and National Policy Requirements:* We identify administrative and national policy requirements in the application package and reference these and other requirements in the *Applicable Regulations* section of this notice.

We reference the regulations outlining the terms and conditions of an award in the *Applicable Regulations* section of this notice and include these and other specific conditions in the GAN. The GAN also incorporates your approved application as part of your binding commitments under the grant.

3. *Open Licensing Requirements:* Unless an exception applies, if you are awarded a grant under this competition, you will be required to openly license to the public grant deliverables created in whole, or in part, with Department grant funds. When the deliverable consists of modifications to pre-existing works, the license extends only to those modifications that can be separately identified and only to the extent that open licensing is permitted under the terms of any licenses or other legal restrictions on the use of pre-existing works. Additionally, a grantee or subgrantee that is awarded competitive grant funds must have a plan to disseminate these public grant deliverables. This dissemination plan can be developed and submitted after your application has been reviewed and selected for funding. For additional information on the open licensing requirements please refer to 2 CFR 3474.20.

4. *Reporting:* (a) If you apply for a grant under this competition, you must ensure that you have in place the necessary processes and systems to comply with the reporting requirements in 2 CFR part 170 should you receive funding under the competition. This does not apply if you have an exception under 2 CFR 170.110(b).

(b) At the end of your project period, you must submit a final performance report, including financial information, as directed by the Secretary. If you receive a multiyear award, you must submit an annual performance report that provides the most current performance and financial expenditure information as directed by the Secretary under 34 CFR 75.118. The Secretary may also require more frequent performance reports under 34 CFR 75.720(c). For specific requirements on reporting, please go to www.ed.gov/fund/grant/apply/appforms/appforms.html.

(c) Under 34 CFR 75.250(b), the Secretary may provide a grantee with additional funding for data collection analysis and reporting. In this case the

Secretary establishes a data collection period.

5. *Performance Measures:* For the purposes of Department reporting under 34 CFR 75.110, the Department has established a set of performance measures, including long-term measures, that are designed to yield information on various aspects of the effectiveness and quality of the Personnel Development to Improve Services and Results for Children with Disabilities program. These measures include (1) the percentage of preparation programs that incorporate scientifically based research or evidence-based practices (EBPs) into their curricula; (2) the percentage of scholars completing the preparation program who are knowledgeable and skilled in EBPs that improve outcomes for children with disabilities; (3) the percentage of scholars who exit the preparation program prior to completion due to poor academic performance; (4) the percentage of scholars completing the preparation program who are working in the area(s) in which they were prepared upon program completion; (5) the Federal cost per scholar who completed the preparation program; (6) the percentage of scholars who completed the preparation program and are employed in high-need districts; and (7) the percentage of scholars who completed the preparation program and who are rated effective by their employers.

In addition, the Department will gather information on the following outcome measures: (1) the number and percentage of scholars proposed by the grantee in their application that were actually enrolled and making satisfactory academic progress in the current academic year; (2) the number and percentage of enrolled scholars who are on track to complete the training program by the end of the project's original grant period; and (3) the percentage of scholars who completed the preparation program and are employed in the field of special education for at least two years.

Grantees may be asked to participate in assessing and providing information on these aspects of program quality.

6. *Continuation Awards:* In making a continuation award under 34 CFR 75.253, the Secretary considers, among other things: whether a grantee has made substantial progress in achieving the goals and objectives of the project; whether the grantee has expended funds in a manner that is consistent with its approved application and budget; and, if the Secretary has established performance measurement requirements, whether the grantee has

made substantial progress in achieving the performance targets in the grantee's approved application.

In making a continuation award, the Secretary also considers whether the grantee is operating in compliance with the assurances in its approved application, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

VII. Other Information

Accessible Format: On request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT**, individuals with disabilities can obtain this document and a copy of the application package in an accessible format. The Department will provide the requestor with an accessible format that may include Rich Text Format (RTF) or text format (txt), a thumb drive, an MP3 file, braille, large print, audiotape, compact disc, or other accessible format.

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. You may access the official edition of the **Federal Register** and the Code of Federal Regulations at www.govinfo.gov. At this site you can view this document, as well as all other Department documents published in the **Federal Register**, in text or Portable Document Format (PDF). To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

You may also access Department documents published in the **Federal Register** by using the article search feature at www.federalregister.gov. Specifically, through the advanced search feature at this site, you can limit your search to documents published by the Department.

Glenna Wright-Gallo,

Assistant Secretary for Special Education and Rehabilitative Services.

[FR Doc. 2024-23255 Filed 10-7-24; 8:45 am]

BILLING CODE 4000-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 2333-000]

Rumford Falls Hydro, LLC ; Notice of Authorization for Continued Project Operation

The license for the Rumford Falls Hydroelectric Project No. 2333 was

issued for a period ending September 30, 2024.

Section 15(a)(1) of the FPA, 16 U.S.C. 808(a)(1), requires the Commission, at the expiration of a license term, to issue from year-to-year an annual license to the then licensee(s) under the terms and conditions of the prior license until a new license is issued, or the project is otherwise disposed of as provided in section 15 or any other applicable section of the FPA. If the project's prior license waived the applicability of section 15 of the FPA, then, based on section 9(b) of the Administrative Procedure Act, 5 U.S.C. 558(c), and as set forth at 18 CFR 16.21(a), if the licensee of such project has filed an application for a subsequent license, the licensee may continue to operate the project in accordance with the terms and conditions of the license after the minor or minor part license expires, until the Commission acts on its application. If the licensee of such a project has not filed an application for a subsequent license, then it may be required, pursuant to 18 CFR 16.21(b), to continue project operations until the Commission issues someone else a license for the project or otherwise orders disposition of the project.

If the project is subject to section 15 of the FPA, notice is hereby given that an annual license for Project No. 2333 is issued to Rumford Falls Hydro, LLC for a period effective October 1, 2024, through September 30, 2025, or until the issuance of a new license for the project or other disposition under the FPA, whichever comes first.

If issuance of a new license (or other disposition) does not take place on or before September 30, 2025, notice is hereby given that, pursuant to 18 CFR 16.18(c), an annual license under section 15(a)(1) of the FPA is renewed automatically without further order or notice by the Commission, unless the Commission orders otherwise.

If the project is not subject to section 15 of the FPA, notice is hereby given that Rumford Falls Hydro, LLC is authorized to continue operation of the Rumford Falls Hydroelectric Project under the terms and conditions of the prior license until the issuance of a subsequent license for the project or other disposition under the FPA, whichever comes first.

Dated: October 1, 2024.

Debbie-Anne A. Reese,

Acting Secretary.

[FR Doc. 2024-23185 Filed 10-7-24; 8:45 am]

BILLING CODE 6717-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings

Take notice that the Commission has received the following Natural Gas Pipeline Rate and Refund Report filings:

Filings Instituting Proceedings

Docket Numbers: PR25-1-000.

Applicants: Valley Crossing Pipeline, LLC.

Description: § 284.123(g) Rate Filing: Petition for Rate Approval and Statement of Operating Conditions to be effective 12/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001-5205.

Comment Date: 5 p.m. ET 10/22/24.

§ 284.123(g) Protest: 5 p.m. ET 12/2/24.

Docket Numbers: RP24-1104-000.

Applicants: Eastern Gas Transmission and Storage, Inc.

Description: § 4(d) Rate Filing: EGTS—2024 Annual EPCA to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930-5086.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24-1105-000.

Applicants: Algonquin Gas Transmission, LLC.

Description: § 4(d) Rate Filing: Negotiated Rates—Eversource to Emera Energy eff 9-28-24 to be effective 9/28/2024.

Filed Date: 9/30/24.

Accession Number: 20240930-5090.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24-1106-000.

Applicants: Adelphia Gateway, LLC.

Description: § 4(d) Rate Filing: Adelphia Gateway General Section 4 Rate Case Filing to be effective 4/1/2025.

Filed Date: 9/30/24.

Accession Number: 20240930-5096.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24-1107-000.

Applicants: Panhandle Eastern Pipe Line Company, LP.

Description: § 4(d) Rate Filing: Fuel Filing on 9-30-24 to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930-5105.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24-1108-000.

Applicants: Rover Pipeline LLC.

Description: § 4(d) Rate Filing: Fuel Filing on 9-30-24 to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930-5106.

Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP24–1109–000.
Applicants: Trunkline Gas Company, LLC.

Description: § 4(d) Rate Filing: Fuel Filing on 9–30–24 to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5108.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1110–000.

Applicants: El Paso Natural Gas Company, L.L.C.

Description: § 4(d) Rate Filing: Negotiated Rate Agreements Update (Hartree 614700 610670 Oct 2024) to be effective 10/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5109.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1111–000.

Applicants: Eastern Gas Transmission and Storage, Inc.

Description: § 4(d) Rate Filing: EGTS—2024 Annual TCRA to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5123.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1112–000.

Applicants: El Paso Natural Gas Company, L.L.C.

Description: § 4(d) Rate Filing: Negotiated Rate Agreement Update (Conoco Oct 2024) to be effective 10/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5124.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1113–000.

Applicants: Gulf Run Transmission, LLC.

Description: § 4(d) Rate Filing: Interim Transporter's Use Filing—Effective 11–1–2024 to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5150.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1114–000.

Applicants: Stagecoach Pipeline & Storage Company LLC.

Description: § 4(d) Rate Filing: Proposed Tariff Language for OFO Update to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5159.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1115–000.

Applicants: Tennessee Gas Pipeline Company, L.L.C.

Description: § 4(d) Rate Filing: Pipeline Safety and Greenhouse Gas Cost Adjustment Mechanism—2024 to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5184.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1116–000.

Applicants: Natural Gas Pipeline Company of America LLC.

Description: Semi-Annual Penalty Revenue Crediting Report of Natural Gas Pipeline Company of America LLC.

Filed Date: 9/30/24.

Accession Number: 20240930–5186.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1117–000.

Applicants: Northern Natural Gas Company.

Description: § 4(d) Rate Filing: 20240930 Housekeeping Filing to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5198.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1118–000.

Applicants: Maritimes & Northeast Pipeline, L.L.C.

Description: § 4(d) Rate Filing: MNUS FRQ 2024 Filing to be effective 11/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5215.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1119–000.

Applicants: Tennessee Gas Pipeline Company, L.L.C.

Description: § 4(d) Rate Filing: Equinor/EQT—SP397146/SP77253 to be effective 10/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5241.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1120–000.

Applicants: Northern Natural Gas Company.

Description: § 4(d) Rate Filing: 202409301 Negotiated Rate Filing to be effective 9/30/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5259.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1121–000.

Applicants: Northern Natural Gas Company.

Description: § 4(d) Rate Filing: 20240930 Negotiated Rate Filing to be effective 10/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930–5318.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP24–1122–000.

Applicants: Algonquin Gas Transmission, LLC.

Description: OFO Penalty Disbursement Report of Algonquin Gas Transmission, LLC.

Filed Date: 9/30/24.

Accession Number: 20240930–5357.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP25–1–000.

Applicants: Mountain Valley Pipeline, LLC.

Description: § 4(d) Rate Filing: Price Indices Updates—11/1/2024 to be effective 11/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5006.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP25–2–000.

Applicants: Equitrans, L.P.
Description: § 4(d) Rate Filing: Price Indices and OFO Penalty Updates—11/1/2024 to be effective 11/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5007.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP25–3–000.

Applicants: Rager Mountain Storage Company LLC.

Description: § 4(d) Rate Filing: Price Index and OFO Penalty Update—11/1/2024 to be effective 11/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5008.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP25–4–000.

Applicants: Mountain Valley Pipeline, LLC.

Description: § 4(d) Rate Filing: Negotiated Rate Capacity Release Agreements—10/1/2024 to be effective 10/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5009.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP25–5–000.

Applicants: Iroquois Gas Transmission System, L.P.

Description: § 4(d) Rate Filing: 10.1.24 Negotiated Rates—Citadel Energy Marketing LLC R–7705–25 to be effective 11/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5058.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP25–6–000.

Applicants: Iroquois Gas Transmission System, L.P.

Description: § 4(d) Rate Filing: 10.1.24 Negotiated Rates—Citadel Energy Marketing LLC R–7705–26 to be effective 11/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5071.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP25–7–000.

Applicants: Algonquin Gas Transmission, LLC.

Description: § 4(d) Rate Filing: Negotiated Rates—Various Releases eff 10–1–24 to be effective 10/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5072.

Comment Date: 5 p.m. ET 10/15/24.

Docket Numbers: RP25–8–000.

Applicants: Iroquois Gas Transmission System, L.P.

Description: § 4(d) Rate Filing: 10.1.24 Negotiated Rates—Citadel Energy Marketing LLC R–7705–27 to be effective 11/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5079.
Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP25–9–000.
Applicants: Iroquois Gas Transmission System, L.P.
Description: § 4(d) Rate Filing: 10.1.24 Negotiated Rates—Citadel Energy Marketing LLC R–7705–28 to be effective 11/1/2024.
Filed Date: 10/1/24.
Accession Number: 20241001–5083.
Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP25–10–000.
Applicants: NEXUS Gas Transmission, LLC.
Description: § 4(d) Rate Filing: Negotiated Rates—Various Releases eff 10–1–2024 to be effective 10/1/2024.
Filed Date: 10/1/24.
Accession Number: 20241001–5086.
Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP25–11–000.
Applicants: Maritimes & Northeast Pipeline, L.L.C.
Description: § 4(d) Rate Filing: Negotiated Rates—Northern to Emera Energy 3145 eff 10–1–24 to be effective 10/1/2024.
Filed Date: 10/1/24.
Accession Number: 20241001–5087.
Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP25–12–000.
Applicants: Northern Natural Gas Company.
Description: § 4(d) Rate Filing: 20241001 Non-Conforming Contract Iogen RC to be effective 11/1/2024.
Filed Date: 10/1/24.
Accession Number: 20241001–5107.
Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP25–13–000.
Applicants: Rover Pipeline LLC.
Description: § 4(d) Rate Filing: Summary of Negotiated Rate Capacity Release Agreements 10–1–2024 to be effective 10/1/2024.
Filed Date: 10/1/24.
Accession Number: 20241001–5126.
Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP25–14–000.
Applicants: Texas Gas Transmission, LLC.
Description: § 4(d) Rate Filing: 2024 Fuel Tracker Filing to be effective 11/1/2024.
Filed Date: 10/1/24.
Accession Number: 20241001–5142.
Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP25–15–000.
Applicants: Spire STL Pipeline LLC.
Description: § 4(d) Rate Filing: Spire STL Pipeline Annual LAUF Filing to be effective 11/1/2024.
Filed Date: 10/1/24.
Accession Number: 20241001–5167.
Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP25–16–000.

Applicants: Saltville Gas Storage Company L.L.C.
Description: § 4(d) Rate Filing: SGSC 2024 Fuel Filing to be effective 11/1/2024.
Filed Date: 10/1/24.
Accession Number: 20241001–5172.
Comment Date: 5 p.m. ET 10/15/24.
Docket Numbers: RP25–17–000.
Applicants: Equitrans, L.P.
Description: § 4(d) Rate Filing: Negotiated Rate Capacity Release Agreement—10/01/2024 to be effective 10/1/2024.
Filed Date: 10/1/24.
Accession Number: 20241001–5201.
Comment Date: 5 p.m. ET 10/15/24.
 Any person desiring to intervene, to protest, or to answer a complaint in any of the above proceedings must file in accordance with Rules 211, 214, or 206 of the Commission's Regulations (18 CFR 385.211, 385.214, or 385.206) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

Filings in Existing Proceedings

Docket Numbers: RP24–1106–001.
Applicants: Adelphia Gateway, LLC.
Description: Tariff Amendment: Adelphia Gateways Amended Rate Case Filing to be effective 11/1/2024.
Filed Date: 9/30/24.
Accession Number: 20240930–5211.
Comment Date: 5 p.m. ET 10/15/24.
 Any person desiring to protest in any of the above proceedings must file in accordance with Rule 211 of the Commission's Regulations (18 CFR 385.211) on or before 5:00 p.m. Eastern time on the specified comment date.

The filings are accessible in the Commission's eLibrary system (<https://elibrary.ferc.gov/idmws/search/fercgensearch.asp>) by querying the docket number.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: <http://www.ferc.gov/docs-filing/efiling/filing-req.pdf>. For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

The Commission's Office of Public Participation (OPP) supports meaningful public engagement and participation in Commission proceedings. OPP can help members of the public, including landowners, environmental justice communities, Tribal members and others, access publicly available information and navigate Commission processes. For public inquiries and assistance with making filings such as

interventions, comments, or requests for rehearing, the public is encouraged to contact OPP at (202) 502–6595 or OPP@ferc.gov.

Dated: October 1, 2024.

Debbie-Anne A. Reese,
Acting Secretary.

[FR Doc. 2024–23186 Filed 10–7–24; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 15350–000]

BOST1 Hydroelectric, LLC; Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions To Intervene, and Competing Applications

On April 22, 2024, BOST1 Hydroelectric, LLC filed an application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act (FPA), proposing to study the feasibility of the proposed Lock and Dam No. 14 Hydroelectric Project, a hydropower project proposed to be located at the U.S. Army Corps of Engineers' (Corps) Mississippi Lock and Dam 14 located on the Mississippi River, near Hampton, Illinois. The sole purpose of a preliminary permit, if issued, is to grant the permit holder priority to file a license application during the permit term. A preliminary permit does not authorize the permit holder to perform any land-disturbing activities or otherwise enter upon lands or waters owned by others without the owners' express permission.

The proposed Lock and Dam 14 Hydroelectric Project would consist of the following: (1) a 700-foot-long and 300-foot-wide intake area with trashracks; (2) a 150-foot-long and 78-foot-wide reinforced concrete powerhouse adjacent to the existing Corps dam; (3) three turbine-generator units each with a rated capacity of 8.0 megawatts (MW), for a total installed powerhouse capacity of 24.0 MW; (4) a 150-foot-long tailrace; (5) a 2.5-mile-long underground transmission line extending from the switchyard adjacent to the powerhouse to the point of interconnect with the existing Mid-Atlantic Power 161 kilovolt transmission line; and (6) a rockfill dike extending 500 feet upstream and a deflection dike extending 900 feet downstream. The proposed project would have an estimated annual generation of 153.3 gigawatt-hours.

Applicant Contact: Douglas A. Spaulding, Nelson Energy, 1030 Tyrol Trail, Minnesota, MN 55416; phone: (612) 599-8493.

FERC Contact: Shivani Khetani; phone: (212) 273-5917, or by email at shivani.khetani@ferc.gov.

Deadline for filing comments, motions to intervene, competing applications (without notices of intent), or notices of intent to file competing applications: 60 days from the issuance of this notice. Competing applications and notices of intent must meet the requirements of 18 CFR 4.36.

The Commission's Office of Public Participation (OPP) supports meaningful public engagement and participation in Commission proceedings. OPP can help members of the public, including landowners, environmental justice communities, Tribal members and others, access publicly available information and navigate Commission processes. For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, the public is encouraged to contact OPP at (202) 502-6595 or *OPP@ferc.gov*.

The Commission strongly encourages electronic filing. Please file comments, motions to intervene, notices of intent, and competing applications using the Commission's eFiling system at <https://ferconline.ferc.gov/eFiling.aspx>. Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at <https://ferconline.ferc.gov/QuickComment.aspx>. You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, you may submit a paper copy. Submissions sent via the U.S. Postal Service must be addressed to: Debbie-Anne A. Reese, Acting Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Debbie-Anne A. Reese, Acting Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852. The first page of any filing should include docket number P-15350-000.

More information about this project, including a copy of the application, can be viewed or printed on the "eLibrary" link of the Commission's website at <https://elibrary.ferc.gov/eLibrary/search>. Enter the docket number (P-15350) in the docket number field to access the

document. For assistance, contact FERC Online Support.

Dated: October 1, 2024.

Debbie-Anne A. Reese,

Acting Secretary.

[FR Doc. 2024-23182 Filed 10-7-24; 8:45 am]

BILLING CODE 6717-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

Take notice that the Commission received the following electric corporate filings:

Docket Numbers: EC24-125-000.

Applicants: Darby Power, LLC, Gavin Power, LLC, Lawrenceburg Power, LLC, Waterford Power, LLC, Lightstone Marketing LLC, ECP ControlCo, LLC.

Description: Joint Application for Authorization Under Section 203 of the Federal Power Act of Darby Power, LLC, et al.

Filed Date: 9/27/24.

Accession Number: 20240927-5296.

Comment Date: 5 p.m. ET 11/26/24.

Docket Numbers: EC24-126-000.

Applicants: Griffith Energy LLC, Onward Griffith Holdings, LLC.

Description: Joint Application for Authorization Under Section 203 of the Federal Power Act of Griffith Energy LLC, et al.

Filed Date: 9/27/24.

Accession Number: 20240927-5297.

Comment Date: 5 p.m. ET 10/18/24.

Take notice that the Commission received the following Complaints and Compliance filings in EL Dockets:

Docket Numbers: EL24-113-000.

Applicants: Independent Market Monitor for PJM v. Indicated Energy Efficiency Sellers.

Description: Offer of Settlement of the Independent Market Monitor for PJM.

Filed Date: 9/30/24.

Accession Number: 20240930-5359.

Comment Date: 5 p.m. ET 10/22/24.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER10-2302-011; ER19-2674-004.

Applicants: New Mexico PPA Corporation, Public Service Company of New Mexico.

Description: Notice of Non-Material Change in Status of Public Service Company of New Mexico, et al.

Filed Date: 9/27/24.

Accession Number: 20240927-5295.

Comment Date: 5 p.m. ET 10/18/24.

Docket Numbers: ER17-261-005.

Applicants: Lawrenceburg Power, LLC.

Description: Compliance filing: Lawrenceburg Informational Filing to be effective 12/1/2018.

Filed Date: 9/30/24.

Accession Number: 20240930-5288.

Comment Date: 5 p.m. ET 10/21/24.

Docket Numbers: ER17-262-005.

Applicants: Waterford Power, LLC.

Description: Compliance filing: Waterford Informational Filing to be effective 8/1/2018.

Filed Date: 9/30/24.

Accession Number: 20240930-5299.

Comment Date: 5 p.m. ET 10/21/24.

Docket Numbers: ER24-2448-002.

Applicants: Wisconsin Electric Power Company.

Description: Tariff Amendment: Notice Regarding August 28, 2024

Deficiency Letter to be effective 9/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001-5260.

Comment Date: 5 p.m. ET 10/22/24.

Docket Numbers: ER24-3059-000.

Applicants: Dan's Mountain Wind Force, LLC.

Description: Supplement to 09/17/2024 Dan's Mountain Wind Force, LLC tariff filing.

Filed Date: 9/26/24.

Accession Number: 20240926-5194.

Comment Date: 5 p.m. ET 10/8/24.

Docket Numbers: ER24-3158-000.

Applicants: Public Service Company of New Mexico.

Description: § 205(d) Rate Filing:

Economic Benefit Contracts to be effective 10/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930-5280.

Comment Date: 5 p.m. ET 10/21/24.

Docket Numbers: ER24-3159-000.

Applicants: Public Service Company of Colorado.

Description: § 205(d) Rate Filing:

2024-09-30-PSC-SSL-AP-2023-3-APSISA-755-0.0.0 to be effective 10/1/2024.

Filed Date: 9/30/24.

Accession Number: 20240930-5326.

Comment Date: 5 p.m. ET 10/21/24.

Docket Numbers: ER25-1-000.

Applicants: Consolidated Edison Company of New York, Inc.

Description: § 205(d) Rate Filing:

Amendment of CESD Surcharge 9-2024 to be effective 10/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001-5004.

Comment Date: 5 p.m. ET 10/22/24.

Docket Numbers: ER25-2-000.

Applicants: Midcontinent

Independent System Operator, Inc., Missouri Joint Municipal Electric Utility Commission.

Description: § 205(d) Rate Filing: Midcontinent Independent System Operator, Inc. submits tariff filing per 35.13(a)(2)(iii): 2024–10–01_MJMEUC Request for Approval of Capital Structure Compliance to be effective 1/1/2025.

Filed Date: 10/1/24.

Accession Number: 20241001–5102.

Comment Date: 5 p.m. ET 10/22/24.

Docket Numbers: ER25–3–000.

Applicants: Escalante Solar I, LLC.

Description: Tariff Amendment:

Notice of Cancellation of Rate Schedule to be effective 12/31/9998.

Filed Date: 10/1/24.

Accession Number: 20241001–5185.

Comment Date: 5 p.m. ET 10/22/24.

Docket Numbers: ER25–4–000.

Applicants: Escalante Solar II, LLC.

Description: Tariff Amendment:

Notice of Cancellation of Rate Schedule to be effective 12/31/9998.

Filed Date: 10/1/24.

Accession Number: 20241001–5186.

Comment Date: 5 p.m. ET 10/22/24.

Docket Numbers: ER25–5–000.

Applicants: Escalante Solar III, LLC.

Description: Tariff Amendment:

Notice of Cancellation of Rate Schedule to be effective 12/31/9998.

Filed Date: 10/1/24.

Accession Number: 20241001–5188.

Comment Date: 5 p.m. ET 10/22/24.

Docket Numbers: ER25–6–000.

Applicants: Northern States Power Company, a Minnesota corporation.

Description: Tariff Amendment:

2024–10–01 NSP–CAPX–Brookings–CMA–NOC 536 to be effective 6/1/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5219.

Comment Date: 5 p.m. ET 10/22/24.

Docket Numbers: ER25–7–000.

Applicants: Cascade Energy Storage II LLC.

Description: Baseline eTariff Filing: Application for Market-Based Rate Authorization, Request for Related Waivers to be effective 10/8/2024.

Filed Date: 10/1/24.

Accession Number: 20241001–5281.

Comment Date: 5 p.m. ET 10/22/24.

Take notice that the Commission received the following electric securities filings:

Docket Numbers: ES24–62–000.

Applicants: Upper Peninsula Power Company.

Description: Application Under Section 204 of the Federal Power Act for Authorization to Issue Securities of Upper Peninsula Power Company.

Filed Date: 9/27/24.

Accession Number: 20240927–5294.

Comment Date: 5 p.m. ET 10/18/24.

Docket Numbers: ES24–63–000.

Applicants: El Paso Electric Company.

Description: Application Under Section 204 of the Federal Power Act for Authorization to Issue Securities of El Paso Electric Company.

Filed Date: 9/30/24.

Accession Number: 20240930–5369.

Comment Date: 5 p.m. ET 10/21/24.

Docket Numbers: ES25–1–000.

Applicants: GridLiance High Plains LLC.

Description: Application Under Section 204 of the Federal Power Act for Authorization to Issue Securities of GridLiance High Plains LLC.

Filed Date: 10/1/24.

Accession Number: 20241001–5338.

Comment Date: 5 p.m. ET 10/22/24.

The filings are accessible in the Commission's eLibrary system (<https://elibrary.ferc.gov/idmws/search/fercgensearch.asp>) by querying the docket number.

Any person desiring to intervene, to protest, or to answer a complaint in any of the above proceedings must file in accordance with Rules 211, 214, or 206 of the Commission's Regulations (18 CFR 385.211, 385.214, or 385.206) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: <http://www.ferc.gov/docs-filing/efiling/filing-req.pdf>. For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

The Commission's Office of Public Participation (OPP) supports meaningful public engagement and participation in Commission proceedings. OPP can help members of the public, including landowners, environmental justice communities, Tribal members and others, access publicly available information and navigate Commission processes. For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, the public is encouraged to contact OPP at (202) 502–6595 or OPP@ferc.gov.

Dated: October 1, 2024.

Debbie-Anne A. Reese,

Acting Secretary.

[FR Doc. 2024–23189 Filed 10–7–24; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP24–520–000]

El Paso Natural Gas Company, LLC; Notice of Request Under Blanket Authorization and Establishing Intervention and Protest Deadline

Take notice that on September 17, 2024, El Paso Natural Gas Company, LLC (EPNG), P.O. Box 1087, Colorado Springs, Colorado 80944, filed in the above referenced docket, a prior notice request pursuant to sections 157.205, 157.208, and 157.210 of the Commission's regulations under the Natural Gas Act (NGA), and EPNG's blanket certificate issued in Docket No. CP82–435–000,¹ for authorization to construct, install, modify, operate and maintain a new compressor station and appurtenances (Haystack Compressor Station). All of the above facilities are located in Yavapai County, Arizona (Maricopa Lateral Expansion Project). The project will allow EPNG to provide an incremental annual average of 50,517 dekatherms per day (Dth/day) of firm natural gas transportation service on the existing Maricopa Lateral (Line No. 1203) and provide increased operational flexibility on Line No. 1203. The estimated cost for the project is \$32 million, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

In addition to publishing the full text of this document in the **Federal Register**, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the internet through the Commission's Home Page (<http://www.ferc.gov>). From the Commission's Home Page on the internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

User assistance is available for eLibrary and the Commission's website during normal business hours from FERC Online Support at (202) 502–6652 (toll free at 1–866–208–3676) or email at ferconlinesupport@ferc.gov, or the Public Reference Room at (202) 502–8371, TTY (202) 502–8659. Email the

¹ See *El Paso Natural Gas Company*, 20 FERC ¶ 62,454 (1982).

Public Reference Room at
public.reference@ferc.gov.

Any questions concerning this request should be directed to Francisco Tarin, Regulatory Director, El Paso Natural Gas Company, LLC, P.O. Box 1087, Colorado Springs, Colorado 80944, (719) 667-7517, Francisco_Tarin@kindermorgan.com.

Public Participation

There are three ways to become involved in the Commission's review of this project: you can file a protest to the project, you can file a motion to intervene in the proceeding, and you can file comments on the project. There is no fee or cost for filing protests, motions to intervene, or comments. The deadline for filing protests, motions to intervene, and comments is 5 p.m. Eastern Time on December 2, 2024. How to file protests, motions to intervene, and comments is explained below.

The Commission's Office of Public Participation (OPP) supports meaningful public engagement and participation in Commission proceedings. OPP can help members of the public, including landowners, environmental justice communities, Tribal members and others, access publicly available information and navigate Commission processes. For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, the public is encouraged to contact OPP at (202) 502-6595 or OPP@ferc.gov.

Protests

Pursuant to section 157.205 of the Commission's regulations under the NGA,² any person³ or the Commission's staff may file a protest to the request. If no protest is filed within the time allowed or if a protest is filed and then withdrawn within 30 days after the allowed time for filing a protest, the proposed activity shall be deemed to be authorized effective the day after the time allowed for protest. If a protest is filed and not withdrawn within 30 days after the time allowed for filing a protest, the instant request for authorization will be considered by the Commission.

Protests must comply with the requirements specified in section 157.205(e) of the Commission's regulations,⁴ and must be submitted by the protest deadline, which is November 30, 2024. A protest may also serve as a motion to intervene so long as the

protestor states it also seeks to be an intervenor.

Interventions

Any person has the option to file a motion to intervene in this proceeding. Only intervenors have the right to request rehearing of Commission orders issued in this proceeding and to subsequently challenge the Commission's orders in the U.S. Circuit Courts of Appeal.

To intervene, you must submit a motion to intervene to the Commission in accordance with Rule 214 of the Commission's Rules of Practice and Procedure⁵ and the regulations under the NGA⁶ by the intervention deadline for the project, which is November 30, 2024. As described further in Rule 214, your motion to intervene must state, to the extent known, your position regarding the proceeding, as well as your interest in the proceeding. For an individual, this could include your status as a landowner, ratepayer, resident of an impacted community, or recreationist. You do not need to have property directly impacted by the project in order to intervene. For more information about motions to intervene, refer to the FERC website at <https://www.ferc.gov/resources/guides/how-to/intervene.asp>.

All timely, unopposed motions to intervene are automatically granted by operation of Rule 214(c)(1). Motions to intervene that are filed after the intervention deadline are untimely and may be denied. Any late-filed motion to intervene must show good cause for being late and must explain why the time limitation should be waived and provide justification by reference to factors set forth in Rule 214(d) of the Commission's Rules and Regulations. A person obtaining party status will be placed on the service list maintained by the Secretary of the Commission and will receive copies (paper or electronic) of all documents filed by the applicant and by all other parties.

Comments

Any person wishing to comment on the project may do so. The Commission considers all comments received about the project in determining the appropriate action to be taken. To ensure that your comments are timely and properly recorded, please submit your comments on or before November 30, 2024. The filing of a comment alone will not serve to make the filer a party to the proceeding. To become a party, you must intervene in the proceeding.

How To File Protests, Interventions, and Comments

There are two ways to submit protests, motions to intervene, and comments. In both instances, please reference the Project docket number CP24-520-000 in your submission.

(1) You may file your protest, motion to intervene, and comments by using the Commission's eFiling feature, which is located on the Commission's website (www.ferc.gov) under the link to Documents and Filings. New eFiling users must first create an account by clicking on "eRegister." You will be asked to select the type of filing you are making; first select "General" and then select "Protest", "Intervention", or "Comment on a Filing"; or⁷

(2) You can file a paper copy of your submission by mailing it to the address below. Your submission must reference the Project docket number CP24-520-000.

To file via USPS: Debbie-Anne A. Reese, Acting Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, DC 20426

To file via any other method: Debbie-Anne A. Reese, Acting Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852

The Commission encourages electronic filing of submissions (option 1 above) and has eFiling staff available to assist you at (202) 502-8258 or FercOnlineSupport@ferc.gov.

Protests and motions to intervene must be served on the applicant either by mail at: Francisco Tarin, Regulatory Director, El Paso Natural Gas Company, LLC, P.O. Box 1087, Colorado Springs, Colorado 80944, or by email (with a link to the document) at Francisco_Tarin@kindermorgan.com. Any subsequent submissions by an intervenor must be served on the applicant and all other parties to the proceeding. Contact information for parties can be downloaded from the service list at the eService link on FERC Online.

Tracking the Proceeding

Throughout the proceeding, additional information about the project will be available from the Commission's Office of External Affairs, at (866) 208-FERC, or on the FERC website at www.ferc.gov using the "eLibrary" link as described above. The eLibrary link

⁷ Additionally, you may file your comments electronically by using the eComment feature, which is located on the Commission's website at www.ferc.gov under the link to Documents and Filings. Using eComment is an easy method for interested persons to submit brief, text-only comments on a project.

² 18 CFR 157.205.

³ Persons include individuals, organizations, businesses, municipalities, and other entities. 18 CFR 385.102(d).

⁴ 18 CFR 157.205(e).

⁵ 18 CFR 385.214.

⁶ 18 CFR 157.10.

also provides access to the texts of all formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. For more information and to register, go to www.ferc.gov/docs-filing/subscription.asp.

Dated: October 1, 2024.
Debbie-Anne A. Reese,
Acting Secretary.
[FR Doc. 2024-23188 Filed 10-7-24; 8:45 am]
BILLING CODE 6717-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 7186-000]

Missisquoi, LLC; Notice of Authorization for Continued Project Operation

The license for the Sheldon Springs Hydroelectric Project No. 7186 was issued for a period ending September 30, 2024.

Section 15(a)(1) of the FPA, 16 U.S.C. 808(a)(1), requires the Commission, at the expiration of a license term, to issue from year-to-year an annual license to the then licensee(s) under the terms and conditions of the prior license until a new license is issued, or the project is otherwise disposed of as provided in section 15 or any other applicable section of the FPA. If the project's prior license waived the applicability of section 15 of the FPA, then, based on section 9(b) of the Administrative Procedure Act, 5 U.S.C. 558(c), and as set forth at 18 CFR 16.21(a), if the licensee of such project has filed an application for a subsequent license, the licensee may continue to operate the project in accordance with the terms and conditions of the license after the minor or minor part license expires, until the Commission acts on its application. If the licensee of such a project has not filed an application for a subsequent license, then it may be required, pursuant to 18 CFR 16.21(b), to continue project operations until the Commission issues someone else a license for the project or otherwise orders disposition of the project.

If the project is subject to section 15 of the FPA, notice is hereby given that an annual license for Project No. 7186 is issued to Missisquoi, LLC for a period effective October 1, 2024, through September 30, 2025, or until the issuance of a new license for the project or other disposition under the FPA, whichever comes first.

If issuance of a new license (or other disposition) does not take place on or before September 30, 2025, notice is hereby given that, pursuant to 18 CFR 16.18(c), an annual license under section 15(a)(1) of the FPA is renewed automatically without further order or notice by the Commission, unless the Commission orders otherwise.

If the project is not subject to section 15 of the FPA, notice is hereby given that Missisquoi, LLC is authorized to continue operation of the Sheldon Springs Hydroelectric Project under the terms and conditions of the prior license until the issuance of a subsequent license for the project or other disposition under the FPA, whichever comes first.

Dated: October 1, 2024.
Debbie-Anne A. Reese,
Acting Secretary.
[FR Doc. 2024-23183 Filed 10-7-24; 8:45 am]
BILLING CODE 6717-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 2701-061]

Erie Boulevard Hydropower, L.P.; Notice of Revised Procedural Schedule for Final Environmental Assessment for the Proposed Project Relicense

On February 26, 2021, Erie Boulevard Hydropower, L.P. (Erie) filed an application for a new major license to continue to operate and maintain the 39.75-megawatt (MW) West Canada Creek Hydroelectric Project No. 2701 (West Canada Creek Project). On June 27, 2022, Commission staff issued a notice of intent to prepare a draft and final Environmental Assessment (EA) to evaluate the effects of relicensing the West Canada Creek Project. The notice of intent included a schedule for preparing a draft and final EA. On September 6, 2023, Commission staff issued the draft EA. By notices issued September 21, 2023 and March 25, 2024, staff revised the procedural schedule for completing the final EA.

By this notice, Commission staff is updating the procedural schedule for completing the final EA. The revised

schedule is shown below. Further revisions to the schedule may be made as appropriate.

Milestone	Target date
Issue Final EA	October 2024.

Any questions regarding this notice may be directed to Laurie Bauer at (202) 502-6519, or by email at laurie.bauer@ferc.gov.

Dated: October 1, 2024.
Debbie-Anne A. Reese,
Acting Secretary.
[FR Doc. 2024-23184 Filed 10-7-24; 8:45 am]
BILLING CODE 6717-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ID-9044-001]

Rochow, Garrick, J; Notice of Filing

Take notice that on September 27, 2024, Garrick J. Rochow submitted for filing, application for authority to hold interlocking positions, pursuant to section 305(b) of the Federal Power Act, 16 U.S.C. 825d (b) and part 45.8 of the Federal Energy Regulatory Commission's (Commission) Rules of Practice and Procedure, 18 CFR part 45.8.

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211, 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. Such notices, motions, or protests must be filed on or before the comment date. On or before the comment date, it is not necessary to serve motions to intervene or protests on persons other than the Applicant.

In addition to publishing the full text of this document in the **Federal Register**, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the internet through the Commission's Home Page (<http://www.ferc.gov>) using the "eLibrary" link. Enter the docket number excluding the last three digits in the docket number field to access the document. At this time, the Commission has suspended access to the Commission's Public Reference Room, due to the

proclamation declaring a National Emergency concerning the Novel Coronavirus Disease (COVID-19), issued by the President on March 13, 2020. For assistance, contact the Federal Energy Regulatory Commission at FERCOnlineSupport@ferc.gov or call toll-free, (886) 208-3676 or TTY, (202) 502-8659.

The Commission strongly encourages electronic filings of comments, protests and interventions in lieu of paper using the “eFiling” link at <http://www.ferc.gov>. Persons unable to file electronically may mail similar pleadings to the Federal Energy Regulatory Commission, 888 First Street NE, Washington, DC 20426. Hand delivered submissions in docketed proceedings should be delivered to Health and Human Services, 12225 Wilkins Avenue, Rockville, Maryland 20852.

The Commission’s Office of Public Participation (OPP) supports meaningful public engagement and participation in Commission proceedings. OPP can help members of the public, including landowners, environmental justice communities, Tribal members and others, access publicly available information and navigate Commission processes. For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, the public is encouraged to contact OPP at (202) 502-6595 or OPP@ferc.gov.

Comment Date: 5:00 p.m. Eastern Time on October 22, 2024.

Dated: October 1, 2024.

Debbie-Anne A. Reese,
Acting Secretary.

[FR Doc. 2024-23187 Filed 10-7-24; 8:45 am]

BILLING CODE 6717-01-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OW-2023-0329; FRL-10681-01-OW]

Issuance of a General Permit for Ocean Disposal of Marine Mammal and Sea Turtle Carcasses

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability of proposed general permit.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to re-issue a general permit under the Marine Protection, Research and Sanctuaries Act (MPRSA) to authorize the transport of marine mammal and sea turtle carcasses from the United States and

disposal of marine mammal and sea turtle carcasses in ocean waters. Permit authorization is available for any officer, employee, agent, department, agency, or instrumentality of Tribal, Federal, state, or local unit of government, as well as any Marine Life Health and Stranding Response Program (MLHSRP) Stranding Agreement Holder, and any Alaska Native, who already may take a marine mammal or sea turtle under the Endangered Species Act (ESA) and/or Marine Mammal Protection Act (MMPA). In 2017, the EPA issued a general permit for the ocean disposal of marine mammal carcasses to streamline MPRSA authorization and reduce burdens associated with case-by-case permitting. Permit re-issuance is necessary because the most recent permit expired on January 4, 2024. The EPA is not proposing substantive changes to the content of the recently expired general permit. The EPA invites public comment on all aspects of this proposed general permit.

DATES: Comments on this proposed general permit will be accepted until December 9, 2024.

ADDRESSES: You may send comments, identified by Docket ID No. EPA-HQ-OW-2023-0329, by any of the following methods:

- **Federal eRulemaking Portal:** <https://www.regulations.gov> (our preferred method). Follow the online instructions for submitting comments.
- **Mail:** U.S. Environmental Protection Agency, EPA Docket Center, Office of Water Docket, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.
- **Hand Delivery or Courier:** EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center’s hours of operations are 8:30 a.m.–4:30 p.m., Monday–Friday (except Federal Holidays).

Instructions: All submissions received must include the Docket ID No. for this proposed general permit. Comments received may be posted without change to <https://www.regulations.gov>, including any personal information provided. For detailed instructions on sending comments, see the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Cheryl Zulick, Freshwater and Marine Regulatory Branch; Oceans, Wetlands, and Communities Division, Mail Code 4504T, Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone (202) 566-0583; email address: zulick.cheryl@epa.gov.

SUPPLEMENTARY INFORMATION:

A. Written Comments

Submit your comments, identified by Docket ID No. EPA-HQ-OW-2023-0329, at <https://www.regulations.gov>. Once submitted, comments cannot be edited or removed from the docket. The Environmental Protection Agency (EPA) may publish any comment received to its public docket. Do not submit to EPA’s docket at <https://www.regulations.gov> any information you consider to be Confidential Business Information (CBI), Proprietary Business Information (PBI), or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). Please visit <https://www.epa.gov/dockets/commenting-epa-dockets> for additional submission methods; the full EPA public comment policy; information about CBI, PBI, or multimedia submissions; and general guidance on making effective comments.

I. General Information

A. Does this action apply to me?

The authorization proposed in this general permit is available for any officer, employee, agent, department, agency, or instrumentality of Tribal, Federal, state or local unit of government, as well as any Marine Life Health and Stranding Response Program (MLHSRP), including any Stranding Agreement Holder, and any Alaska Native, who already may take a marine mammal under the Endangered Species Act (ESA) or Marine Mammal Protection Act (MMPA), to transport from the United States and dispose of a marine mammal or sea turtle carcass in ocean waters.

B. Does this action require the disposal of marine mammal or sea turtle carcasses in ocean waters?

The proposed general permit does not require ocean disposal of marine mammal or sea turtle carcasses; it merely authorizes ocean disposal when there is a need for such disposals.

C. Why does the EPA permit ocean disposal of marine mammal and sea turtle carcasses?

Unless expressly excluded from the Marine Protection, Research, and

Sanctuaries Act (MPRSA), the transportation and disposition of any material in ocean waters, including marine mammal and sea turtle carcasses, requires a permit under the MPRSA.

D. Why does this action require reporting?

Given the natural occurrence of marine mammal and sea turtle carcasses in the marine environment, the disposal of marine mammal or sea turtle carcasses into the ocean is not anticipated to have any adverse effect on human health, fisheries resources, or marine ecosystems. Under the MPRSA regulations (40 CFR 224.1 through 224.2), each person dumping materials under a general permit must maintain records of the physical and chemical characteristics of the material dumped, the times and locations of the dumping, and any other information required as a condition of the permit. Those records must be reported to the EPA as required under the general permit. Additionally, to meet the United States' international treaty obligation for reporting under the London Convention, the EPA reports information about disposals under this general permit, and all other activities authorized by the MPRSA, annually to the International Maritime Organization.

II. Federal Law and International Conventions

Unless expressly excluded from the MPRSA, the transportation for the purpose of dumping and dumping of any material in ocean waters requires authorization under the MPRSA. The MPRSA uses the term "dumping," and that term is defined broadly to encompass the disposition of material both for the purpose of disposal, including the disposal of marine mammal or sea turtle carcasses at sea, and for purposes other than disposal.

In the United States, the MPRSA implements the requirements of the London Convention, the international treaty that protects the marine environment from the dumping of wastes and other matter into the ocean. Contracting Parties to the London Convention agreed to control dumping by implementing regulatory programs to assess the need for, and the potential impact of, dumping. The London Convention requires that Contracting Parties issue a permit for the dumping of wastes and other matter at sea and report, annually, on all permits issued and monitoring activities undertaken. Under the MPRSA, the EPA establishes general terms of authorization for the ocean disposal of marine mammal and

sea turtle carcasses, but other Federal laws are implicated.

The Marine Mammal Protection Act (MMPA), which is relevant for the purposes of this permit, as explained later, regulates "marine mammals" meaning any mammal that is morphologically adapted to the marine environment (including sea otters and members of the orders Sirenia, Pinnipedia, and Cetacea) or primarily inhabits the marine environment (*e.g.*, polar bears). The Marine Turtle Conservation Act defines a sea turtle using the term "marine turtle", which means any member of the family Cheloniidae or Dermochelyidae. Other than for Alaska Natives with disposal needs when engaged in subsistence uses recognized by the MMPA, the EPA does not anticipate that ocean disposal will be necessary for marine mammal or sea turtle carcasses except in unusual circumstances, such as but not limited to, beached and floating marine mammal or sea turtle carcasses and mass strandings of marine mammals or sea turtles resulting in mortalities. In those unusual circumstances, ocean disposal may be necessary to protect human health, for example, when other disposal options are not available.

Before 2017, the EPA permitted the ocean disposal of cetacean (whales and related species) and pinniped (seals and related species) carcasses on a case-by-case basis, with emergency permits. The EPA issued a general permit for the ocean disposal of marine mammal carcasses, which became effective in January 2017, to streamline MPRSA authorization and reduce burdens associated with case-by-case permitting. That general permit provided authorization from January 5, 2017, through January 4, 2024. Under the MPRSA, general permits may be issued for a period no longer than seven years. By issuing the proposed general permit, the general permit's authorization to transport marine mammal and sea turtle carcasses for the purpose of disposal and to dispose marine mammal and sea turtle carcasses in ocean waters would be issued for another seven-year period. Since January 5, 2017, when the first general permit for the ocean disposal of marine mammal carcasses became effective, the EPA has authorized 32 marine mammal carcass disposals in ocean waters under the general permit and an additional 43 marine mammal carcass disposals using emergency permits. The proposed permit would avoid the need for future emergency permitting for marine mammal or sea turtle carcasses.

Federal laws providing protection and conservation of marine mammals and

sea turtles include the MMPA, the ESA, the Marine Turtle Conservation Act, the Whaling Convention Act (WCA), the Fur Seal Act, and international conventions, including the Inter-American Convention for the Protection and Conservation of Sea Turtles, the International Convention for the Regulation of Whaling, which established the International Whaling Commission (IWC), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Although this proposed general permit applies only to marine mammal or sea turtle carcasses, certain international regulations are relevant. The United States is a party to the IWC and IWC regulations are self-implementing. IWC regulations recognize indigenous or aboriginal subsistence whaling. As relevant to subsistence whaling in the United States, the IWC sets catch limits for the Western Arctic stock of bowhead whales based upon the needs of subsistence fishing in Alaska villages. The hunt is managed cooperatively by the National Marine Fisheries Service (NMFS) and the Alaska Eskimo Whaling Commission under the WCA and the MMPA. As such, any Alaska Native, who already may take a marine mammal under the MMPA and the ESA, are provided authority under this proposed general permit should marine mammal carcasses need to be transported and disposed at sea.

The other relevant Federal program under the MMPA and the ESA is implemented by NMFS. MLHSRP Stranding Agreement Holders are provided authority under this proposed general permit because Stranding Agreement Holders are authorized to take marine mammals subject to the provisions of the MMPA (16 U.S.C. 1361 *et seq.*) and the Fur Seal Act of 1966, as amended (16 U.S.C. 1151 *et seq.*). MLHSRP Stranding Agreement Holders are provided authority under this proposed general permit because Stranding Agreement Holders also are authorized to take sea turtles subject to the provisions of the ESA (16 U.S.C. 1531 *et seq.*) and the implementing regulations governing the taking, importing, and exporting of endangered and threatened marine species and designated critical habitat (50 CFR parts 222 through 226). As such, MLHSRP Stranding Agreement Holders may have a need for ocean disposal should stranded marine mammals or sea turtles die.

III. Hazard to Public Safety and Navigation

A floating carcass near shore (*e.g.*, in a harbor) may pose a risk to public

safety before making land fall to the extent it might attract predators (*e.g.*, sharks) to a recreation area in nearby waters or pose a hazard to navigation. Per regulations promulgated by the U.S. Army Corps of Engineers (USACE), at 33 CFR 245.20, the determination of a navigation hazard is made jointly by the USACE and the U.S. Coast Guard (USCG). If such a determination is made, the USACE determines appropriate remedial action as described in USACE regulations at 33 CFR 245.25, which may include removal of the carcass(es). MPRSA authorization to transport the carcass for the purpose of ocean disposal would be available through this proposed general permit if the navigation hazard removal operation requires ocean disposal of such carcasses.

IV. Strandings and Beachings

Marine mammals or sea turtles that have died or have become sick or injured can reach the ocean shoreline by a variety of mechanisms. Possible mechanisms include: beaching, which involves a marine mammal or sea turtle carcass being driven ashore by currents or winds; stranding (single or multiple) of live marine mammal(s) or sea turtle(s) that subsequently die; and transport on the bow of vessels. In most stranding cases, the causes of marine mammal and sea turtle strandings are unknown, but some causes may include the following: disease, parasite infestation, harmful algal blooms, injuries due to ship strikes, fishery entanglements, pollution exposure, unusual weather or oceanographic events, trauma, and starvation. While many marine mammals and sea turtles die every year, most carcasses never reach the shore; rather, the carcasses are consumed by other organisms or decompose sufficiently to sink to the ocean bottom where, depending upon size, the carcass may form the basis of an “organic fall” (*e.g.*, kelp, wood, and whale falls) ecosystem.

Stranding or beaching of marine mammals, sea turtles and/or marine mammal or sea turtle carcasses may pose a risk to public health due to the potential to transfer communicable diseases (*e.g.*, brucellosis, poxvirus, and mycobacteriosis) to the public. Marine carcasses present a significant disposal concern not only because of their size but also due to the frequency with which carcasses reach the shoreline. From 2006–2021, an average of 6,300 marine mammals stranded on United States shorelines per year (NMFS, 2024). A large majority of marine mammals that strand are either dead or die shortly after stranding (NMFS, 2022).

V. Disposal and Management Options

Generally, MLHSRP Stranding Agreement Holders are authorized to respond to marine mammals and sea turtles that are found floating near shore or beached, stranded along the shore. While Stranding Agreement Holders do not and cannot respond to every stranded marine mammal and sea turtle, when they do respond and deem disposal necessary, the carcass must be disposed of properly. The MLHSRP has prepared a programmatic Environmental Impact Statement that describes, among other things, disposal and management options for carcasses of deceased marine mammals and sea turtles.

For a dead marine mammal or sea turtle encountered, generally available methods for carcass disposal and management fall into two main categories: remove-from-the-environment and remain-in-the-environment. Remove-from-the-environment methods entail moving the carcass for disposal through controlled means and include disposing of a carcass in a landfill, and incinerating, rendering, or composting the carcass. Remain-in-the-environment methods involve leaving the marine mammal or sea turtle carcass in the environment to decompose naturally and include the following: allowing the carcass to remain and decompose in place; burying the carcass in place; and transporting the carcass to sea for ocean disposal. No one method is recommended for every carcass, and several factors are necessarily considered to determine the best disposal method for each carcass. Selection of a disposal method depends on factors such as number and size of the animal(s), carcass condition, the location, if chemicals were administered (including as antibiotics, sedatives and/or chemical euthanasia agents), availability of local resources, and logistics. Location considerations include coastal geography, currents, proximity to areas used extensively by the public, and Tribal, Federal, state, and/or local laws and regulations. While other disposal methods are briefly discussed in background materials associated with this general permit, the proposed general permit only concerns the disposal method to tow or otherwise transport marine mammal or sea turtle carcass(es) to sea for ocean disposal.

A. Remove-From-the-Environment Methods

One benefit of removing the carcass from the environment is minimizing the likelihood of infectious disease transmission to humans, domesticated

animals, and wildlife. These methods either sequester the carcass or destroy the carcass and any associated pathogens and should be considered if the animal is suspected to have died from a disease that can easily spread to human or other animal populations. Remove-from-the-environment approaches can also be beneficial if the carcass contains toxic chemicals, such as certain chemical euthanasia agents (*e.g.*, pentobarbital). Some of these methods effectively remove these substances from the environment.

1. Disposal in a Licensed Landfill

The most widespread remove-from-the-environment method is disposal in a landfill. With this method, the carcass is removed from the beaching or stranding location and brought to a nearby landfill in a lined or contained transport vehicle. Disposal in a licensed landfill can minimize the impact of releasing any toxic substances contained in the carcass, including euthanasia drugs (*e.g.*, pentobarbital), because the substances can be contained to one location. However, not all licensed landfills may be able to accept animals that have been euthanized with barbiturates. Therefore, authorities would contact local landfills to ensure that the landfill can accept carcasses that contain these drugs.

2. Incineration

Incineration is the process by which carcass tissues are broken down by burning. Incineration destroys the physical integrity of a carcass and the remaining ashes and hard parts (*i.e.*, teeth, bones, etc.) are buried in a landfill. Disposal via incineration can prevent the spread of diseases, toxic materials, and veterinary drugs contained in the carcass from entering the environment. Disposal via the incineration method may require preplanning and consultation with the local facility to fully understand the biological load that the incineration facility can handle. Incineration can be very expensive. Incineration facilities are not commonly found in all areas of the United States and the availability of commercial or municipal incinerators may be limited by the transportability of the carcass.

3. Rendering

Rendering is an activity in which the carcass is rapidly reduced and recycled into new products. Rendering uses all parts of the animal and often creates a protein by-product (*e.g.*, protein meal) and a fat by-product (*e.g.*, tallow and grease). Disposal via rendering exposes the carcass to high heat to eliminate

pathogens and prevent the spread of diseases. However, if a carcass contains euthanasia drugs some facilities may not be able to accept or process the carcasses depending on the drug. Disposal via rendering requires preplanning and consultation with the rendering facility to fully understand its policies for disposal of animals that were chemically euthanized (e.g., pentobarbital). Rendering may be very expensive. Rendering facilities are not commonly found in all areas of the United States and the availability of rendering facilities may be limited by the transportability of the carcass.

4. Composting

Composting marine mammal or sea turtle carcasses would involve bringing a carcass to a commercial composting facility (which may or may not require a state or local operating license) or to a site designated specifically for carcass composting or composting in a carcass digester. While composting is similar to disposal in a landfill, it offers the added benefit that the nutrients contained within the carcass are transformed into biologically available material. Disposal via composting can minimize the impact of releasing any pathogens or toxic substances contained in the carcass, including euthanasia drugs (pentobarbital), because composted carcasses are contained to one location. However, if a carcass contains certain veterinary drugs some facilities may not be able to accept or process the carcasses. Disposal via composting requires preplanning and consultation with the local facility to fully understand their policies for disposal of animals that were chemically euthanized and to ensure that all carcass compost will be used in accordance with local and state regulations on wildlife compost. Composting facilities are not commonly found in all areas of the United States and the availability of composting facilities may be limited by the transportability of the carcass.

B. Remain-in-the-Environment Methods

The remain-in-environment methods of disposal involve leaving the marine mammal or sea turtle carcass to naturally break down in the same, or similar, area in which it was found. Natural decomposition (or burial) may be used for both small and large marine mammals or sea turtles and is often the most preferred method if the carcass size or remoteness of the carcass location avoids logistical issues. Remain-in-the-environment disposal methods should not be used for animals that were chemically euthanized with

drugs known to cause secondary poisoning, such as pentobarbital.

1. In-Place Decomposition

Allowing a carcass to remain in place to decompose may be an acceptable disposal method if the carcass does not pose a risk for public health and animal health or result in unacceptable odor or visual aesthetic impacts. In-place decomposition may also be the most practical when the carcass is located in an area that is remote or inaccessible to heavy equipment, thereby making other options, such as burying in place or moving to a different disposal location, infeasible.

2. In-Place Burial

In-place burial of a marine mammal or sea turtle carcass involves burying the carcass in the same, or similar, location where the animal was found and may be used as a disposal method, especially when the carcass is located near population centers or near areas used for recreational activities. In-place burial involves excavating a trough above the high tide line, placing the carcass in the trench, and covering the carcass with the excavated material. Burying the carcass creates a barrier that minimizes the smell and sight of the decaying carcass and reduces the likelihood of transmitting infectious diseases and attracting scavengers. Utilizing the in-place burial disposal method also depends on other factors such as the sediment substrate in the area (e.g., fine sediments versus rocks and boulders), the availability of appropriate excavation equipment, and potential environmental damage (e.g., destruction of dunes, beach grass, or nesting sites) caused by the transportation and operation of excavation equipment.

3. Ocean Disposal

The ocean disposal method is the only method to which the proposed general permit would apply and impose requirements. If a carcass cannot be moved to a land-based disposal location, left above ground to decay, or be buried in-place, it may be towed or moved offshore via another transportation method and disposed in the ocean, provided that an acceptable ocean disposal "site" or location can be identified. Ocean disposal of a marine mammal or sea turtle carcass entails selection of an appropriate location for the carcass to be released or sunk to prevent the carcass from drifting or washing back onshore, becoming a hazard to navigation, and/or damaging protected and sensitive habitats. The carcass may float due to gas formation

from decomposition. To facilitate rapid sinking, opening the body cavity may be necessary. If the carcass is to be sunk rather than released at the disposal site, appropriate carcass preparation may be necessary (e.g., piercing the body cavity, attaching weights, cement barriers, or chains) at the ocean disposal site so that the carcass will not return to shore or pose a hazard to navigation.

VI. Potential Consequences of Marine Mammal and Sea Turtle Carcass Disposal in the Ocean and Why a General Permit Is Appropriate

Leaving a marine mammal or sea turtle carcass in the environment to decompose (e.g., in-place decomposition or burial, ocean disposal) provides many benefits to terrestrial, pelagic and benthic ecosystems (NMFS, 2022). Marine mammal and sea turtle carcasses which become stranded on shores and are left in-place to decompose or are buried are an integral part of coastal ecosystems providing a key source of food to scavengers and nutrients to the sediments, which may be utilized by algae and plants potentially increasing landscape heterogeneity (Bui 2009; Laidre et al., 2018; Quaggitto et al., 2022; Schultz et al., 2022). Marine mammal and sea turtle carcasses that decompose while floating in ocean waters provide an energy-rich source of food for other marine animals, such as orcas and sharks (Leclerc et al., 2011; Quaggitto et al., 2022; Schultz et al., 2022; Tucker et al., 2019; Whitehead and Reeves, 2005). Most marine mammal and sea turtle carcasses sink to the seafloor and decompose naturally (Quaggitto et al., 2022; Schultz et al., 2022). Whale carcasses are a significant source of carrion in the marine environment, representing a huge food supply to scavengers and decomposers (Smith and Baco, 2003).

Whale falls, which occur naturally, are the most studied examples of marine mammal carcass decomposition on the seafloor (Smith et al., 2015). Whale falls are sites of intense and lasting enrichment of organic material and sulfides on the seafloor which attract and sustain diverse communities of vertebrate and invertebrate scavengers (Quaggitto et al., 2022). Most deep-sea benthic ecosystems are organic-carbon limited and, in many cases, are dependent upon organic matter from surface waters (Smith and Baco, 2003). A sunken carcass provides a large load of organic carbon to the seafloor and enhances the structural complexity of the seafloor, provides habitats for chemosynthetic organisms and results in the establishment of specialized

biological assemblages (Smith and Baco, 2003; Oldach et al., 2022; Smith et al., 2015). Over 20 macrofaunal species are known to exclusively inhabit the microenvironment formed by large organic falls and over 30 other macrofaunal species are known to inhabit these sites (Smith and Baco, 2003). The deep-sea benthic ecosystem response to whale falls has been the subject of scientific study and several stages of succession have been observed in the assemblages (Smith and Baco, 2003). The duration of these stages varies greatly with carcass size, but generally occur as follows. The first stage is marked by the formation of bathyal scavenger assemblages that include hagfishes, sleeper sharks, crabs, and amphipods. During the second stage, sediments surrounding the carcass, which have become enriched with organic carbon, become colonized by high densities of worms (e.g., *Dorvilleidae*, *Chrysopetalidae*). Once the consumption of soft tissue is complete, decomposition proceeds dominantly via anaerobic microbial digestion of bone lipids. The efflux of sulfides from the bones may, depending upon the size of the skeleton, provide for the formation of chemoautotrophic assemblages, which marks the third stage of succession. Chemoautotrophic assemblages formed typically consist of organisms such as heterotrophic bacteria, mussels, snails, worms, limpets, and amphipods.

Water and sediment quality may be negatively affected by at-sea disposals of marine mammal carcasses because a carcass could release contaminants into the water during decomposition (NMFS, 2022). Because contaminants would dilute rapidly in the water or break down over time in the tissues, the adverse impact would be minor and no different than what would happen naturally had the carcass sank to the seafloor and decomposed (NMFS, 2022).

The EPA has permitted numerous at-sea disposals of marine mammal carcasses under the MPRSA. In 2020, the EPA conducted biological, chemical, and physical monitoring of a location offshore where several marine mammal carcasses had been sunk for disposal between 2009 and 2020, with the most recent disposal occurring six months prior to monitoring. The purpose of this survey was to determine the impact the decomposing whales may have caused to the immediate benthic community and surrounding area. Monitoring results from a recently disposed humpback whale carcass revealed that the carcass was reduced to whale bones with minimal whale tissue remaining within six months and found no

measurable impact on sediment quality parameters (including total organic carbon, grain size, and polychlorinated biphenyl concentration) from decomposition.

Less research is available regarding at-sea decomposition of sea turtle carcasses. When a sea turtle dies at sea, however, the carcass typically sinks until decomposition gases cause the body to bloat and float to the surface (Schultz et al., 2022). Partially submerged, sea turtle carcasses may drift as they are transported by winds and currents until it washes onshore or decomposes further and sinks to the seafloor (Santos et al., 2018). Once settled on the seafloor, sea turtle carcasses would decompose naturally (Schultz et al., 2022). The EPA seeks to minimize the adverse impacts to the marine environment from the materials used to sink carcasses through required consultation by the permittee with the applicable EPA MPRSA Coordinator. Materials that have been used for sinking marine mammal carcasses under the MPRSA include jute rope, sandbags, concrete and steel cables that do not cause adverse impact on water or sediment quality (NMFS, 2022). Materials used effectively to do so include: (1) small volumes of sand that do not cause an adverse effect on the seafloor substrate type; (2) burlap sandbags and jute rope (used to sink smaller carcasses) because they are non-plastic, especially biodegradable materials that would not persist or cause an ingestion hazard (Araya-Schmidt and Queirolo, 2019; Rautenbach et al., 2024; Unsworth et al., 2019; Wang et al., 2021; Zhang et al., 2015); (3) jute rope used to tie the bags to the animal that is the shortest length needed so to minimize the risk of entanglement; and (4) concrete keel blocks and steel cable used to sink larger carcasses made from non-plastic, inert, materials that are not anticipated to degrade the water quality of the seafloor or the water column (Melchers et al., 2022; Moffat et al., 2017; NMFS, 2022; Sun et al., 2022). Generally, marine mammal and sea turtle strandings represent a minimum measure of actual at-sea mortality as scientific studies have estimated that stranding events represent only 10–20% of total mortalities in open ocean environments (Epperly et al., 1996; Hart et al., 2006; Santos et al., 2018).

Considering the available scientific information on marine mammal and sea turtle strandings, marine mammal and sea turtle in situ decomposition and organic falls, the EPA finds that the potential adverse effects of ocean disposal of marine mammal or sea turtle carcasses are minimal for the following

reasons: (1) except in rare instances, most marine mammal or sea turtle carcasses would sink to and decompose on the ocean floor rather than wash ashore; (2) the formation of an organic fall is a naturally occurring phenomenon with no known adverse environmental impacts; (3) the materials used for sinking carcasses are chosen to minimize adverse environmental impacts; (4) the site selection for sinking carcasses requires consultation to avoid adverse environmental impacts; and (5) transporting a marine mammal or sea turtle carcass to sea for ocean disposal, when other disposal methods are not viable, presents a minimal perturbation to a naturally occurring phenomenon.

The EPA's findings are consistent with the statutory considerations applicable to permit issuance under the MPRSA because: (1) the general permit requires consideration of land-based alternatives; (2) marine mammal and sea turtle carcass disposals will not cause a significant adverse effect on human health, fisheries resources, or marine ecosystems; and (3) marine mammal and sea turtle carcass disposals will not result in permanent adverse effects.

VII. Statutory and Regulatory Background

MPRSA Section 101, 33 U.S.C. 1411, prohibits the unpermitted transportation of any material for the purpose of dumping it into ocean waters. MPRSA Section 102(a)(1), 33 U.S.C. 1412(a), authorizes the EPA, after notice and the opportunity for public hearings, to issue ocean dumping permits. MPRSA Section 104(c), 33 U.S.C. 1414(c), authorizes the EPA to issue general permits for the transportation for the purpose of dumping, dumping, or both for specified materials, or classes of materials, it determines will have a minimal adverse environmental impact. The EPA regulations explain that EPA may issue general permits for the dumping of materials that have a minimal adverse environmental impact and are generally disposed of in small quantities, or emergency permits for specific classes of materials that must be disposed of in emergency situations (40 CFR 220.3(a) and (c)). The towing or other method of transportation to move a marine mammal or sea turtle carcass offshore by any person for disposal at sea constitutes transportation of material for the purpose of dumping in ocean waters, and thus is subject to the MPRSA. Because the material to be disposed will consist of the carcass or carcasses, there will be no materials present that are prohibited by 40 CFR 227.5.

VIII. Consideration of Alaska Natives Engaged in Subsistence Uses

Alaska Natives engaged in subsistence uses are not required to, but may, transport and dispose of marine mammal carcasses in ocean waters. However, Section B of the proposed general permit includes specific considerations that are available to Alaska Native persons engaged in subsistence uses. For purposes of this proposed general permit, the EPA intends the term “Alaska Native” to be based on the statutory term defined at 16 U.S.C. 1371(b) that refers to “any Indian, Aleut, or Eskimo who resides in Alaska and who dwells on the coast of the North Pacific Ocean or the Arctic Ocean” who takes a marine mammal for subsistence purposes or for purposes of creating and selling authentic native articles of handicrafts and clothing and provided such taking is not in a wasteful manner. Section B of the proposed general permit authorizes ocean disposal of marine mammal carcasses by an Alaska Native engaged in subsistence uses for two reasons. First, marine mammals are comparatively abundant and widely distributed throughout coastal Alaska, and Alaska Natives depend upon these natural resources for many customary and traditional uses. Collectively, the customary and traditional uses (e.g., food, clothing) are referred to as “subsistence uses.” Alaska Native subsistence uses of marine mammals have been ongoing for thousands of years. The United States has recognized the importance of subsistence uses of marine mammals by Alaska Natives through enactment of the MMPA, which expressly exempts Alaska Natives engaged in subsistence uses from the general prohibition on “taking” marine mammals under certain circumstances (16 U.S.C. 1371(b)). The MPRSA, by comparison, does not include a similar exemption for the transport and disposal in ocean waters by Alaska Natives when marine mammal carcasses (or parts thereof) have no further use for subsistence purposes. Section B of the proposed general permit accommodates the absence of an MPRSA exemption similar to the MMPA exemption by facilitating authorization of ocean disposal of marine mammal carcasses by Alaska Natives.

Second, many coastal communities of Alaska Natives who engage in subsistence uses are located in remote locations and thus face a time-critical public safety issue, for example, when a marine mammal carcass washes ashore near a village or town, or a marine mammal is harvested or

salvaged, and the carcass is hauled ashore near a village or town. Such carcasses may attract bears or other scavenger animals, which may increase the risk of human injury or mortality. For these reasons, there are specific provisions in the proposed general permit for Alaska Natives engaged in subsistence activities to expedite the transport and disposal of marine mammals in ocean waters, if necessary.

With these considerations in mind, the EPA’s intent in reissuing the Alaska Native-specific permit conditions (see Section B) is, to the maximum extent allowable, to avoid unnecessary interference with long-standing subsistence uses and traditional cultural practices, and to recognize the unique circumstances of Alaska Natives engaged in subsistence uses. In proposing this general permit, the EPA does not intend to change, alter, or otherwise affect subsistence uses of marine mammals by Alaska Natives engaged in subsistence uses. Section B sets forth requirements designed to address these considerations while also complying with international treaties, the MPRSA, and the EPA’s regulations at 40 CFR subchapter H. The primary differences between Sections A and B relate to Federal agency concurrence, distance from land requirements for ocean disposal, and reporting requirements.

To further clarify, the proposed general permit does not in any way *require* ocean disposal of marine mammal carcasses; it merely authorizes ocean disposal of marine mammal carcasses when there is a need for such disposals. Additionally, the proposed general permit is not intended to and does not regulate: any subsistence activities of Alaska Natives, including hunting, harvesting, salvaging, hauling, dressing, butchering, distribution, and consumption of marine mammals (or any other species used for subsistence purposes); the transportation and dumping of marine mammal carcasses on land, such as in whale boneyards or in inland waters (i.e., waters that are landward of the baseline of the territorial sea, such as rivers, lakes and certain enclosed bays or harbors); or leaving marine mammal carcasses to decompose in place on sea ice (or in a hole or lead in the sea ice), where there is no transportation by vessel or other vehicle for the purpose of ocean disposal. The purpose of this proposed general permit is to expedite required authorizations the EPA manages for the ocean disposal of marine mammal carcasses.

IX. Discussion

Considering the information presented in the previous section, the EPA determines that the potential adverse environmental impacts of marine mammal or sea turtle carcass disposal at sea are minimal and that marine mammal and sea turtle carcasses often must be disposed of to mitigate threats to public safety (e.g., recreational uses in nearby waters), as well as risks of navigation hazards. As such, issuance of a general permit for the transportation for the purpose of disposal and the ocean disposal of marine mammal and sea turtle carcasses is appropriate under the MPRSA.

Authorization under Section A of the proposed general permit is available to Tribal, Federal, state, and local government officials and employees acting in the course of official duties and to MLHSRP Stranding Agreement Holders. Section A authorizes such persons to transport and dispose of marine mammal or sea turtle carcasses in ocean waters. Section A requires that each such permittee consult with the MLHSRP of NMFS—and recommends that each such general permittee consults with the applicable USCG District Office—prior to initiating any ocean disposal activities with respect to a marine mammal or sea turtle carcass. Permittees authorized under Section A would need to consult with and obtain concurrence from the applicable EPA Regional Office on selection of an ocean disposal site, which must be at a location three miles seaward of the mean lower low water line (ordinary low water mark) along the coast or a “closing line” across river mouths and openings of bays as demarcated on nautical charts. Disposal sites in the ocean waters of Puget Sound are not subject to the distance from shore restriction, however, permittees would need to consult with and obtain concurrence from EPA Region 10 on selection of the site. The EPA has requested Clean Water Act Section 401 certification from the state of Washington and from Tribes in the Puget Sound area for disposals in the ocean waters of Puget Sound that are not subject to the distance from shore restriction. All permittees authorized under Section A also need to submit a report to the applicable EPA Regional Office on the ocean disposal activities after the disposal.

Alaska Natives engaged in subsistence uses are not required to, but may, transport and dispose of marine mammal carcasses in ocean waters. When disposal in ocean waters is the selected disposal approach, Section B of

the proposed general permit authorizes any Alaska Native engaged in subsistence uses to transport and dispose of a marine mammal carcass in ocean waters. Under Section B, the Alaska Native general permittee selects an ocean disposal site sufficiently far offshore so that currents and winds are not expected to return the carcass to shore and the carcass is not expected to pose a hazard to navigation and afterwards submits, on an annual basis, a report to EPA Region 10 on ocean disposal activities conducted in the prior calendar year. Section B does not require a statement of need for selecting ocean disposal nor does it specify a distance requirement. The EPA has requested Clean Water Act Section 401 certification from the state of Alaska for the Section B authorization.

X. Statutory and Executive Order Reviews

A. Paperwork Reduction Act

The information collections under this general permit are covered under the MPRSA Information Collection Request (ICR) that has been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act. The ICR document that the EPA prepared for all MPRSA activities has been assigned EPA ICR number 0824.08.

Under section 104(e) of the MPRSA, 33 U.S.C. 1414(e) and implementing regulations at 40 CFR 221.1–221.2, applicants for an MPRSA permit must provide information that the EPA determines is necessary to review and evaluate such application, for example, to ensure that ocean dumping is appropriately regulated and will not harm human health or the marine environment. To meet United States' reporting obligation under the London Convention, the EPA reports some of this information in the annual United States ocean dumping report, which is transmitted to the International Maritime Organization for treaty compliance purposes.

Respondents/affected entities: Any officer, employee, agent, department, agency, or instrumentality of Tribal, Federal, state, or local unit of government, as well as any MLHSRP Stranding Agreement Holder, who disposes of a marine mammal or sea turtle carcass in ocean waters and any Alaska Native engaged in subsistence uses who disposes of a marine mammal carcass in ocean waters will be affected by this proposed general permit. Under this proposed general permit, respondents do not need to request permit authorization because the

general permit authorizes ocean disposal of a marine mammal or sea turtle carcass by an eligible person.

Respondent's obligation to respond: Pursuant to regulations implementing Section 104(e) of the MPRSA, 33 U.S.C. 1414(e), at 40 CFR 221.1–221.2, the EPA requires all ocean dumping permittees to supply specified reporting information.

B. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action has Tribal implications. However, the proposed general permit will neither impose substantial direct compliance costs on federally recognized Tribal governments, nor preempt Tribal law. The proposed general permit has Tribal implications because it may affect traditional practices of some Tribes.

The EPA consulted with Tribal officials under the EPA Policy on Consultation and Coordination with Indian Tribes early in the process of reviewing the current general permit and preparing to re-issue this proposed general permit to allow them to have meaningful and timely input into its development.

On February 14, 2023, the EPA emailed a consultation notification letter with a consultation and coordination plan to all 574 federally recognized Tribes, notifying them of this upcoming action and inviting Tribal leaders and designated consultation representatives to participate in the Tribal consultation and coordination process.

In early 2024, when the EPA was considering expanding the scope of the general permit to include ocean waters of Puget Sound, it held an additional Tribal coordination and consultation period for the Tribes in the Puget Sound area that would be affected by any such expansion of the permit's scope.

On April 2, 2024, the EPA emailed a consultation notification letter with a consultation and coordination plan to federally recognized Tribes in the Puget Sound area, notifying the Tribes of the proposal to modify the scope of the permit and inviting Tribal leaders and designated consultation representatives to participate in the Tribal consultation and coordination process. A summary of the Tribal consultation and coordination effort, the Tribal input received, and how the EPA considered the input received may be found in the docket for this action (Docket ID No. EPA-HQ-OW-2023-0329).

XI. References

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- Stacey M. Jensen,**
Director, Oceans, Wetlands, and Communities Division.
- For the reasons stated above, the EPA proposes to issue the general permit for the transportation and ocean disposal of marine mammal or sea turtle carcasses as follows:
- General Permit for the Transportation and Ocean Disposal of Marine Mammal and Sea Turtle Carcasses**
- A. General Requirements for Governmental Entities and Stranding Agreement Holders*
- Except as provided in Section B below, any officer, employee, agent, department, agency, or instrumentality of Tribal, Federal, state, or local unit of government, and any MLHSRP Stranding Agreement Holder, is hereby granted a general permit to transport for the purpose of disposal and dispose of marine mammal and sea turtle carcasses in ocean waters subject to the following conditions:
1. The permittee shall consult with a Stranding Agreement Holder of NMFS prior to initiating any disposal activities. Points of contact for Stranding Agreement Holders are available at <http://www.epa.gov/ocean-dumping/ocean-disposal-marine-mammal-carcasses>.
 2. The permittee shall consult with and obtain written concurrence (via email or letter) from the applicable EPA Regional Office on ocean disposal site selection. A disposal site must be at a location three miles seaward of the mean lower low water line (ordinary low water mark) along the coast or “closing lines” across river mouths and openings of bays as demarcated on nautical charts. Disposal sites in the ocean waters of Puget Sound are not subject to the distance from shore restrictions, however permittees would need to consult with and obtain concurrence from EPA Region 10 on selection of the site. Because the presence of a marine mammal or sea turtle carcass near human habitation or recreation areas may pose a time-critical public safety issue, the permittee may obtain concurrence via telephone from the applicable EPA Regional Office provided that the permittee subsequently obtains written concurrence (via email or letter).
 3. If a determination is made that the carcass must be sunk, rather than released at the disposal site, the transportation and disposal of materials necessary to ensure the sinking of the carcass are also authorized for ocean dumping under this general permit. When materials are to be used to sink the carcass, the permittee must first consult with and obtain written concurrence (via email or letter) from the applicable EPA Regional Office on the selection of materials. Any materials described in 40 CFR 227.5 (prohibited materials) or 40 CFR 227.6 (constituents prohibited as other than trace amounts) shall not be used. The transportation and dumping of any materials other than the materials necessary to ensure the sinking of the carcass are not authorized under this general permit and constitute a violation of the MPRSA. Because the presence of a marine mammal or sea turtle carcass near human habitation or recreation areas may pose a time-critical public safety issue, the permittee may obtain concurrence via telephone from the applicable EPA Regional Office provided that the permittee subsequently obtains written concurrence (via email or letter).
 4. The permittee shall submit a report on the ocean disposal activities authorized by this general permit to the applicable EPA Regional Office within 30 days after carcass disposal. This report shall include:
 - a. A description of the carcass(es) disposed (e.g., species, approximate length, general condition, floating or not);
 - b. The date and time of the disposal, the latitude and longitude of the ocean disposal site, and the geodetic datum associated with the coordinates of the disposal site. Latitude and longitude of the disposal site shall be reported at the highest degree of accuracy available on board the vessel that transported the carcass (e.g., onboard geographic position system technology);
 - c. The name, title, affiliation, and contact information of the person in charge of the disposal operation and the person in charge of the vessel or vehicle that transported the carcass (if different than the person in charge of the disposal);
 - d. A statement of need and rationale for selecting ocean disposal rather than other disposal options; and

5. The permittee shall immediately notify the EPA of any violation of any condition of this general permit.

B. Requirements for Any Alaska Native Engaged in Subsistence Uses

Notwithstanding Section A, any Alaska Native engaged in subsistence uses is hereby granted a general permit to transport for the purpose of disposal and dispose of marine mammal carcasses in ocean waters subject to the following conditions:

1. The permittee shall submit a report (via email or letter) on all disposal activities authorized by this general permit that the permittee has conducted in the prior calendar year. Reports shall be submitted to EPA Region 10 within 30 days of the end of the calendar year. Contact information for EPA Region 10 is available at <http://www.epa.gov/ocean-dumping/ocean-disposal-marine-mammal-carcasses>. This report shall include:

a. The number and type of carcasses disposed;

b. A description of the general vicinity in which the carcasses were disposed; and

c. The name and contact information of the permittee.

2. Where ocean disposal is the selected approach, marine mammal carcasses must be towed or otherwise transported to a site offshore where, based on available information, which may include local or traditional knowledge, currents and winds are not expected to return the carcass to shore and the carcass is not expected to pose a hazard to navigation.

[FR Doc. 2024-23035 Filed 10-7-24; 8:45 am]

BILLING CODE 6560-50-P

FEDERAL COMMUNICATIONS COMMISSION

[FR ID: 248825]

Privacy Act; System of Records

AGENCY: Federal Communications Commission.

ACTION: Notice of a modified system of records.

SUMMARY: The Federal Communications Commission (FCC, Commission, or Agency) proposes to modify an existing system of records, FCC/OS-1, Electronic Comment Filing System (ECFS), subject to the Privacy Act of 1974, as amended. This action is necessary to meet the requirements of the Privacy Act to publish in the **Federal Register** notice of the existence and character of records maintained by the agency. The

Commission uses this system to handle and process public comments related to FCC rulemakings and other proceedings. This modification makes various necessary changes to the Categories of Records and identifies a new FCC point of contact.

DATES: This modified system of records will become effective on October 8, 2024. Written comments on the routine uses are due by November 7, 2024. The routine uses in this action will become effective on November 7, 2024 unless comments are received that require a contrary determination.

ADDRESSES: Send comments to Brendan McTaggart, Federal Communications Commission, 45 L Street NE, Washington, DC 20554 or privacy@fcc.gov.

FOR FURTHER INFORMATION CONTACT: Brendan McTaggart, (202) 418-1738, or privacy@fcc.gov (and to obtain a copy of the Narrative Statement and the Supplementary Document, which include details of the proposed alterations to this system of records). **SUPPLEMENTARY INFORMATION:** As required by the Privacy Act of 1974, as amended, 5 U.S.C. 552a(e)(4) and (e)(11), this document sets forth notice of the proposed modification of a system of records maintained by the FCC. The FCC previously provided notice of the system of records, FCC/OS-1 by publication in the **Federal Register** on December 19, 2023 (88 FR 87774).

The substantive changes and modifications to the previously published version of the FCC/OS-1 system of records include:

1. Updating the Authority, Purposes, Categories of Individuals, and Categories of Records to include the submission of responses to audits of the Equal Employment Opportunity (EEO) programs of multi-channel video program distributors (MVPDs) (including complainants and, via the annual EEO Public File Reports submitted therewith, recruitment and referral sources).

2. Updating Routine Use (5) Law Enforcement and Investigation, and making minor clerical edits to other routine uses, to maintain consistency with recently published FCC SORNs.

SYSTEM NAME AND NUMBER:

FCC/OS-1, Electronic Comment Filing System (ECFS).

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

Office of the Secretary, Federal Communications Commission, 45 L

Street NE, Washington, DC 20554 and 1270 Fairfield Road, Gettysburg, PA 17325.

SYSTEM MANAGER(S):

Office of the Secretary, Federal Communications Commission (FCC), 45 L Street NE, Washington, DC 20554.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

44 U.S.C. chapter 36; 47 U.S.C. 151, 154, and 554; and sections 504 and 508 of the Rehabilitation Act, 29 U.S.C. 794.

PURPOSE(S) OF THE SYSTEM:

The ECFS collects comments and related data or metadata received by the FCC, whether electronically through the ECFS via an internet web-browser, by mail, by hand delivery of paper copy, or by other methods, as well as other files and records submitted in response to Commission rulemakings and docketed proceedings, and by the FCC's administrative law staff as the repository for official records for administrative proceedings. In order to comply with the requirements of various statutes and regulations, the FCC offers multiple avenues through which the public can be involved in the FCC decision-making process and can inform the FCC of concerns regarding compliance with FCC rules and requirements. Collecting and maintaining these types of information allows the FCC to be fully informed in decision-making, implementation, and enforcement endeavors. The FCC Enforcement Bureau also uses ECFS to collect and process responses to audits of the EEO programs of MVPDs to enforce compliance with the Commission's EEO requirements. The ECFS also allows staff access to documents and data necessary for key activities discussed in this SORN including analyzing effectiveness and efficiency of related FCC programs, informing future rule and policy-making activity, and improving staff efficiency. Records in this system are available for public inspection.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Individuals and representatives of groups, companies, and other entities who have filed comments and other files and records in FCC rulemakings and docketed proceedings or other matters arising under the Communications Act of 1934, as amended, the Rehabilitation Act, or related statutes, as well as individuals (including EEO complainants and, via the annual EEO Public File Reports submitted therewith, recruitment and referral sources) identified in responses

to audits of the EEO programs of MVPDs.

CATEGORIES OF RECORDS IN THE SYSTEM:

Comments received by the FCC, whether electronically through the Electronic Comment Filing System (ECFS) via an internet web-browser, by mail, by hand delivery of paper copy, or other methods which include personally identifiable information provided by the filer such as name, home or business address, phone number, and/or email address. ECFS also collects certain network information from a filer and/or user submitting information to the FCC, such as IP address, geolocation, and computer operating system. The system also contains other files and records submitted in response to Commission rulemakings and docketed proceedings, EEO audit responses as well as the annual EEO Public File Reports submitted therein by MVPDs, and records submitted by the FCC's administrative law staff into ECFS as the repository for official records arising out of the conduct of administrative proceedings.

RECORD SOURCE CATEGORIES:

Information in this system is provided by individuals, groups, companies, and other entities who make or provide comments or other files and records in FCC rulemakings, and docketed proceedings, as well as FCC staff.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, all or a portion of the records or information contained in this system may be disclosed to authorized entities, as is determined to be relevant and necessary, outside the FCC as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

1. **Public Access**—Under the rules of the Commission, public comments as well as other files and records submitted in rulemakings and other docketed proceedings are routinely available to the public—unless confidentiality is requested (47 CFR 0.459)—via the ECFS and may also be disclosed to the public in Commission releases.

2. **FCC Enforcement Actions**—When a record in this system involves an informal complaint filed alleging a violation of FCC rules, regulations, orders, or requirements by an applicant, licensee, certified or regulated entity, or an unlicensed person or entity, the complaint may be provided to the alleged violator for a response. Where a

complainant in filing his or her complaint explicitly requests confidentiality of his or her name from public disclosure, the Commission will endeavor to protect such information from public disclosure. Complaints that contain requests for confidentiality may be dismissed if the Commission determines that the request impedes the Commission's ability to investigate and/or resolve the complaint.

3. **Litigation**—Records may be disclosed to the Department of Justice (DOJ) when: (a) the FCC or any component thereof; (b) any employee of the FCC in his or her official capacity; (c) any employee of the FCC in his or her individual capacity where the DOJ or the FCC has agreed to represent the employee; or (d) the United States Government is a party to litigation or has an interest in such litigation, and by careful review, the FCC determines that the records are both relevant and necessary to the litigation, and the use of such records by the Department of Justice is for a purpose that is compatible with the purpose for which the FCC collected the records.

4. **Adjudication**—Records may be disclosed in a proceeding before a court or adjudicative body, when: (a) the FCC or any component thereof; or (b) any employee of the FCC in his or her official capacity; or (c) any employee of the FCC in his or her individual capacity; or (d) the United States Government, is a party to litigation or has an interest in such litigation, and by careful review, the FCC determines that the records are both relevant and necessary to the litigation, and that the use of such records is for a purpose that is compatible with the purpose for which the agency collected the records.

5. **Law Enforcement and Investigation**—When the FCC investigates any violation or potential violation of a civil or criminal law, regulation, policy, executed consent decree, order, or any other type of compulsory obligation and determines that a record in this system, either alone or in conjunction with other information, indicates a violation or potential violation of law, regulation, policy, consent decree, order, or other compulsory obligation, the FCC may disclose pertinent information as it deems necessary to the target of an investigation, as well as with the appropriate Federal, State, local, Tribal, international, or multinational agencies, or a component of such an agency, responsible for investigating, prosecuting, enforcing, or implementing a statute, rule, regulation, or order.

6. **Congressional Inquiries**—Information may be disclosed to a

Congressional office from the record of an individual in response to an inquiry from that Congressional office made at the written request of that individual.

7. **Government-wide Program Management and Oversight**—Information may be disclosed to DOJ to obtain that department's advice regarding disclosure obligations under the Freedom of Information Act (FOIA); or to the Office of Management and Budget (OMB) to obtain that office's advice regarding obligations under the Privacy Act.

8. **Breach Notification**—Records may be disclosed to appropriate agencies, entities, and persons when: (a) the Commission suspects or has confirmed that there has been a breach of PII maintained in the system of records; (b) the Commission has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals, the Commission (including its information system, programs, and operations), the Federal Government, or national security; and; and (c) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with the Commission's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

9. **Assistance to Federal Agencies and Entities Related to Breaches**—Records may be disclosed to another Federal agency or Federal entity, when the Commission determines that information from this system is reasonably necessary to assist the recipient agency or entity in: (a) responding to a suspected or confirmed breach or (b) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, program, and operations), the Federal Government, or national security, resulting from a suspected or confirmed breach.

10. **Non-Federal Personnel**—Information may be disclosed to non-Federal personnel, including contractors, other vendors (e.g., identity verification services), grantees, and volunteers who have been engaged to assist the FCC in the performance of a contract, service, grant, cooperative agreement, or other activity related to this system of records and who need to have access to the records in order to perform their activity.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

This an electronic system of records that resides on the FCC's network.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Records in this system of records can be retrieved by any category field, *e.g.*, individual name, entity name, rulemaking number, and/or docket number.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

The information in this system is maintained and disposed of in accordance with the National Archives and Records Administration (NARA) General Records Schedule 6.6: Rulemaking Records (DAA-GRS-2017-0012).

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

The electronic records, files, and data are stored in a database housed in the FCC computer network. While comments and other files and records are generally publicly available, access to certain information associated with filings is restricted to authorized employees and contractors; and to IT staff, contractors, and vendors who maintain the IT networks and services. Other employees and contractors may be granted access on a need-to-know basis. The electronic files and records are protected by the FCC privacy safeguards, a comprehensive and dynamic set of IT safety and security protocols and features that are designed to meet all Federal privacy standards, including those required by the Federal Information Security Modernization Act of 2014 (FISMA), the Office of Management and Budget (OMB), and the National Institute of Standards and Technology (NIST).

RECORD ACCESS PROCEDURES:

Individuals wishing to request access to and/or amendment of records about themselves should follow the Notification Procedure below.

CONTESTING RECORD PROCEDURES:

Individuals wishing to request access to and/or amendment of records about themselves should follow the Notification Procedure below.

NOTIFICATION PROCEDURES:

Individuals wishing to determine whether this system of records contains information about themselves may do so by writing to privacy@fcc.gov. Individuals requesting access must also comply with the FCC's Privacy Act regulations regarding verification of identity to gain access to records as required under 47 CFR part 0, subpart E.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

88 FR 87774 (December 19, 2023).

Federal Communications Commission.

Marlene Dortch,

Secretary.

[FR Doc. 2024-23214 Filed 10-7-24; 8:45 am]

BILLING CODE 6712-01-P

GENERAL SERVICES ADMINISTRATION

[Notice-PBS-2024-13; Docket No. 2024-0002; Sequence No. 45; UNIQUE IDENTIFIER: SEIS-023-00-009-1727281974]

Notice of Intent To Prepare a Supplemental Environmental Impact Statement for the Expansion and Modernization of the Raul Hector Castro Land Port of Entry and Proposed Commercial Land Port of Entry in Douglas, Arizona

AGENCY: Public Buildings Service (PBS), General Services Administration (GSA).

ACTION: Notice of intent (NOI); announcement of public scoping meeting.

SUMMARY: Pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality Regulations, and the GSA Public Buildings Service NEPA Desk Guide, GSA is issuing this notice to advise the public that a Supplemental Environmental Impact Statement (SEIS) will be prepared to evaluate potential environmental impacts from a proposed flood channel realignment and expansion of retention basin to the west of the Raul Hector Castro (RHC) Land Port of Entry (LPOE) in Douglas, Arizona. This NOI also announces the public scoping process for the SEIS.

DATES:

Public Scoping Period—The public scoping period begins on Friday, October 11, 2024. Interested parties are encouraged to provide comments regarding the scope of the SEIS. Written comments must be received by November 11, 2024 (see **ADDRESSES** section of this NOI on how to submit comments).

Meeting Date—A public scoping meeting will be held on Thursday, October 24, 2024, from 4:00 p.m. to 6:00 p.m. The meeting will be held in the Douglas Visitor Center (see **ADDRESSES** section for location address), where GSA will meet with governmental and public stakeholders to explain the project and obtain input on the scope of the project. The meeting will be an informal open house, where visitors may come, receive information, and

provide written comments. No formal presentation will be provided.

ADDRESSES:

Public Scoping Comments—You may send comments, identified by [2024-0002], by one of the following methods:

- **Email:** Osmahn.Kadri@gsa.gov. Include [2024-0002] in the subject line of the message.

- **Mail:** **Attention:** Osmahn Kadri, NEPA Project Manager, U.S. General Services Administration, c/o Potomac-Hudson Engineering, Inc., 77 Upper Rock Circle, Suite 302, Rockville, MD 20850.

Meeting Location—A public scoping meeting will be held at the Douglas Visitor Center, 345 16th St., Douglas, AZ 85607.

FOR FURTHER INFORMATION CONTACT:

Osmahn Kadri, 415-522-3617, Osmahn.Kadri@gsa.gov.

SUPPLEMENTARY INFORMATION:**Background**

GSA is beginning preparation of a SEIS to analyze the potential impacts resulting from the proposed realignment and reconstruction of the Rose Avenue Channel and construction of a new stormwater retention basin west of the expanded and modernized RHC LPOE. This SEIS will supplement the previous Environmental Impact Statement (EIS) for the RHC LPOE expansion and modernization project. GSA signed the Record of Decision (ROD) for the Final EIS for the Expansion and Modernization of the RHC LPOE and Proposed Commercial LPOE in Douglas, Arizona on May 6, 2024. GSA approved the preferred alternative, identified in the Final EIS as Alternative 2 (Concurrent Construction—Westward Expansion), which would involve construction of a new Commercial LPOE and phased expansion and modernization of the existing RHC LPOE at the same time, with expansion primarily to the west of the existing RHC LPOE.

Under the Proposed Action for the SEIS, the existing concrete box culvert beneath the LPOE would be partially maintained and extended westward near the existing vehicle inspection booths. From there, an open channel would be constructed generally parallel and to the north of Border Road and would discharge into an existing wash just west of Chino Road. The existing north-south channel that runs parallel to Pan American Avenue would be abandoned and sealed or demolished in conjunction with the expansion and modernization of the RHC LPOE. An expanded stormwater retention basin would also be constructed just west of

the existing Alternative 2 Expansion Area as identified in the Final EIS. In addition to the Proposed Action, GSA will also consider the No Action Alternative.

The purpose of the Proposed Action is to address stormwater management and flood control needs for the expanded and modernized RHC LPOE. The need for the Proposed Action is that the current alignment of the Rose Avenue Channel will result in engineering conflicts with the current proposed layout for the expanded RHC LPOE and requires re-routing. Additional land area is also required for necessary stormwater retention at the expanded and modernized RHC LPOE.

Preliminary analysis indicates that short-term adverse environmental impacts may occur during construction on air quality and greenhouse gases from emissions; geology and soils and water resources from ground disturbance; and biological resources from ground disturbance and construction noise. GSA will be conducting a jurisdictional determination, archaeological survey, and Phase I Environmental Site Assessment to inform potential impacts to Waters of the United States, cultural resources, and human health and safety, respectively. Minimal or no impacts are expected to occur to the following resources: transportation and traffic; noise; socioeconomics, and environmental justice. Beneficial impacts are expected to infrastructure and utilities from the improvement of stormwater management facilities. The Proposed Action may require acquisition of additional land to the west of the RHC LPOE. Necessary permits and authorizations will be identified within the Draft EIS.

The Draft EIS is expected to be published in early 2025.

Russell Larson,

*Director, Portfolio Management Division,
Pacific Rim Region, Public Buildings Service.*

[FR Doc. 2024-23200 Filed 10-7-24; 8:45 am]

BILLING CODE 6820-YF-P

OFFICE OF GOVERNMENT ETHICS

Updated OGE Senior Executive Service Performance Review Board

AGENCY: Office of Government Ethics (OGE).

ACTION: Notice.

SUMMARY: Notice is hereby given of the appointment of a member to the OGE Senior Executive Service (SES) Performance Review Board.

DATES: *Applicable date:* October 8, 2024.

FOR FURTHER INFORMATION CONTACT:

Shelley K. Finlayson, Acting Director, Chief of Staff, and Program Counsel, Office of Government Ethics, 250 E Street SW, Suite 750, Washington, DC 20024; Telephone: 202-482-9300; TTY: 800-877-8339; FAX: 202-482-9237.

SUPPLEMENTARY INFORMATION: Federal law at 5 U.S.C. 4314(c) requires each agency to establish, in accordance with regulations prescribed by the Office of Personnel Management at 5 CFR part 430, subpart C and § 430.310 thereof in particular, one or more Senior Executive Service performance review boards. As a small executive branch agency, OGE has just one board. In order to ensure an adequate level of staffing and to avoid a constant series of recusals, the designated members of OGE's SES Performance Review Board are being drawn, as in the past, in large measure from the ranks of other executive branch agencies. The board shall review and evaluate the initial appraisal of each OGE senior executive's performance by their supervisor, along with any recommendations in each instance to the appointing authority relative to the performance of the senior executive. This notice updates the membership of OGE's SES Performance Review Board as it was most recently published at 88 FR 75591 (Nov. 3, 2023).

The following official has been appointed to the SES Performance Review Board of the Office of Government Ethics: Danae M. Serrano, Ethics Counsel, Securities and Exchange Commission. The remaining Board members are Sean Dent, Senior Deputy General Counsel, Federal Housing Finance Agency, and Peter J. Constantine, ADAEO, Office of the General Counsel, Department of Transportation.

Approved: October 2, 2024.

Shelley K. Finlayson,

Acting Director, U.S. Office of Government Ethics.

[FR Doc. 2024-23212 Filed 10-7-24; 8:45 am]

BILLING CODE 6345-02-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

[Document Identifier: CMS-10116]

Agency Information Collection Activities: Submission for OMB Review; Comment Request

AGENCY: Centers for Medicare & Medicaid Services, Health and Human Services (HHS).

ACTION: Notice.

SUMMARY: The Centers for Medicare & Medicaid Services (CMS) is announcing an opportunity for the public to comment on CMS' intention to collect information from the public. Under the Paperwork Reduction Act of 1995 (PRA), federal agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension or reinstatement of an existing collection of information, and to allow a second opportunity for public comment on the notice. Interested persons are invited to send comments regarding the burden estimate or any other aspect of this collection of information, including the necessity and utility of the proposed information collection for the proper performance of the agency's functions, the accuracy of the estimated burden, ways to enhance the quality, utility, and clarity of the information to be collected, and the use of automated collection techniques or other forms of information technology to minimize the information collection burden.

DATES: Comments on the collection(s) of information must be received by the OMB desk officer by November 7, 2024.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function.

To obtain copies of a supporting statement and any related forms for the proposed collection(s) summarized in this notice, please access the CMS PRA website by copying and pasting the following web address into your web browser: <https://www.cms.gov/Regulations-and-Guidance/Legislation/PaperworkReductionActof1995/PRA-Listing>.

FOR FURTHER INFORMATION CONTACT:
William Parham at (410) 786-4669.

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501-3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. The term “collection of information” is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) and includes agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of the PRA (44 U.S.C. 3506(c)(2)(A)) requires federal agencies to publish a 30-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension or reinstatement of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, CMS is publishing this notice that summarizes the following proposed collection(s) of information for public comment:

1. Type of Information Collection Request: Reinstatement without change of a previously approved collection;
Title of Information Collection: Medicare Program: Conditions for Payment of Power Mobility Devices, including Power Wheelchairs and Power-Operated Vehicles; **Use:** We are renewing our request for approval for the collection requirements associated with the final rule, CMS-3017-F (71 FR 17021), which published on April 5, 2006, and required a face-to-face examination of the beneficiary by the physician or treating practitioner, a written prescription, and receipt of pertinent parts of the medical record by the supplier within 45 days after the face-to-face examination that the durable medical equipment (DME) suppliers maintain in their records and make available to CMS and its agents upon request. **Form Number:** CMS-10116 (OMB control number: 0938-0971); **Frequency:** Yearly; **Affected Public:** Business or other for-profits; **Number of Respondents:** 46,990; **Number of Responses:** 46,990; **Total Annual Hours:** 10,964. (For policy questions regarding this collection contact Rachel Katonak at 410-786-2118).

William N. Parham, III,

Director, Division of Information Collections and Regulatory Impacts, Office of Strategic Operations and Regulatory Affairs.

[FR Doc. 2024-23261 Filed 10-7-24; 8:45 am]

BILLING CODE 4120-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Neurological Disorders and Stroke; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of meetings of the Board of Scientific Counselors, National Institute of Neurological Disorders and Stroke.

The meetings will be closed to the public as indicated below in accordance with the provisions set forth in section 552b(c)(6), title 5 U.S.C., as amended for the review, discussion, and evaluation of individual intramural programs and projects conducted by the National Institute of Neurological Disorders and Stroke, including consideration of personnel qualifications and performance, and the competence of individual investigators, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Board of Scientific Counselors, National Institute of Neurological Disorders and Stroke.

Date: October 21–22, 2024.

Time: October 21, 9:00 a.m. to 9:00 p.m., October 22, 9:30 a.m. to 3:00 p.m.

Agenda: To review and evaluate personnel qualifications and performance, and competence of individual investigators.

Place: Porter Neuroscience Research Center, Building 35A, 35 Convent Drive, Bethesda, MD 20892 (Virtual Meeting).

Date: February 3–4, 2025.

Time: February 3, 9:00 a.m. to 9:00 p.m.; February 4, 9:30 a.m. to 3:00 p.m.

Agenda: To review and evaluate personnel qualifications and performance, and competence of individual investigators.

Place: Porter Neuroscience Research Center, Building 35A, 35 Convent Drive, Bethesda, MD 20892 (In-Person and Virtual Meeting).

Date: May 5–6, 2025.

Time: May 5, 9:00 a.m. to 9:00 p.m., May 6, 9:30 a.m. to 3:00 p.m.

Agenda: To review and evaluate personnel qualifications and performance, and competence of individual investigators.

Place: Porter Neuroscience Research Center, Building 35A, 35 Convent Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Jeffrey S. Diamond, Ph.D., Scientific Director, c/o Caren Collins, National Institute of Neurological Disorders and Stroke, NIH, Building 35, Room GF-149, Bethesda, MD 20892, 301-435-1896, diamondj@ninds.nih.gov; collinsca@ninds.nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.853, Clinical Research Related to Neurological Disorders; 93.854, Biological Basis Research in the Neurosciences, National Institutes of Health, HHS.)

Dated: October 2, 2024.

Lauren A. Fleck,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024-23162 Filed 10-7-24; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Mental Health; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Mental Health Special Emphasis Panel; BRAIN Initiative Advanced Postdoctoral Career Transition Award (K99/R00).

Date: November 8, 2024.

Time: 10:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852.

Meeting Format: Virtual Meeting.

Contact Person: Nicholas Gaiano, Ph.D., Review Branch Chief, Division of Extramural Activities, National Institute of Mental Health, National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Bethesda, MD 20892-9606, 301-443-2742, email: nick.gaiano@nih.gov.

Name of Committee: National Institute of Mental Health Special Emphasis Panel; BRAIN Initiative: Data Archives (R24) and Data Integration and Analysis (R01).

Date: November 8, 2024.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852.

Meeting Format: Virtual Meeting.

Contact Person: Jasenka Borzan, Ph.D., Scientific Review Officer, Division of Extramural Activities, National Institutes of Mental Health, 6001 Executive Blvd., Neuroscience Center, Bethesda, MD 20892, 301-435-1260, email: jasenka.borzan@nih.gov.

(Catalogue of Federal Domestic Assistance Program No. 93.242, Mental Health Research Grants, National Institutes of Health, HHS)

Dated: October 2, 2024.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024–23177 Filed 10–7–24; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Center for Complementary & Integrative Health; Notice of Closed Meeting

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Center for Complementary and Integrative Health; Special Emphasis Panel; Clinical and Data Coordinating Center Applications for NCCIH Multi-Site Clinical Trials of Mind and Body Interventions.

Date: November 7, 2024.

Time: 10:00 a.m. to 12:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Center for Complementary and Integrative, Democracy II, 6707 Democracy Blvd., Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Mei Qin, MD, Ph.D., Scientific Review Officer, Office of Scientific Review, Division of Extramural Activities, NCCIH/NIH, 6707 Democracy Blvd., Suite 401, Bethesda, MD 20892, mei.qin@nih.gov.

Contact Person: MARTA V Hamity, Ph.D., Scientific Review Officer, Office of Scientific Review, Division of Extramural Activities, NCCIH/NIH, 6707 Democracy Boulevard, Suite 401, Bethesda, MD 20892, marta.hamity@nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.213, Research and Training in Complementary and Alternative Medicine, National Institutes of Health, HHS)

Dated: October 2, 2024.

Victoria E. Townsend,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024–23224 Filed 10–7–24; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Biological Chemistry and Macromolecular Biophysics Integrated Review Group; Drug Discovery and Molecular Pharmacology B Study Section.

Date: October 31–November 1, 2024.

Time: 8:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Razvan Cornea, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 904L, Bethesda, MD 20892, (301) 480–1955, cornearl@csr.nih.gov.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Imaging and Bioengineering Technology for Visual Systems (IBV).

Date: November 4–5, 2024.

Time: 8:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Place: The Watergate, 2650 Virginia Avenue NW, Washington, DC 20037.

Contact Person: Susan Gillmor, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (240) 762–3076, susan.gillmor@nih.gov.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Fellowships: Learning, Memory, Language, Communication and Related Neuroscience.

Date: November 4–5, 2024.

Time: 8:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: Canopy by Hilton, 940 Rose Avenue, North Bethesda, MD 20852.

Contact Person: Alexei Kondratyev, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5200, MSC 7846, Bethesda, MD 20892, 301–435–1785, kondratyevad@csr.nih.gov.

Name of Committee: Applied Therapeutics for Cancer Integrated Review Group; Drug Discovery and Molecular Pharmacology C Study Section.

Date: November 4–5, 2024.

Time: 8:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: The Westin Georgetown, 2350 M Street NW, Washington, DC 20037.

Contact Person: Jeffrey Smiley, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 6194, MSC 7804, Bethesda, MD 20892, (301) 272–4596, smileyja@csr.nih.gov.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Member Conflict: Radiation Therapeutics and Biology.

Date: November 4, 2024.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Lambratu Rahman Sesay, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 6214, MSC 7804, Bethesda, MD 20892, 301–905–8294, rahman-sesay@csr.nih.gov.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Member conflict: Topics on Biobehavioral Processes.

Date: November 4–5, 2024.

Time: 10:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Natalie S. Dailey, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 827–4451, daileyns@csr.nih.gov.

Name of Committee: Center for Scientific Review Special Emphasis Panel; PAR–24–129: Specific Pathogen Free Macaque Colonies.

Date: November 4, 2024.

Time: 1:00 p.m. to 3:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Latha Malaiyandi, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 812Q, Bethesda, MD 20892, (301) 435–1999, malaiyandilm@csr.nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine;

93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: October 1, 2024.

Victoria E. Townsend,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024–23223 Filed 10–7–24; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Amended Notice of Meeting

Notice is hereby given of a change in the meeting of the Viral Dynamics and Transmission Study Section, October 24, 2024, 08:00 a.m. to October 25, 2024, 06:00 p.m., National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD, 20892 which was published in the **Federal Register** on September 27, 2024, 89 FR 79302.

This meeting is being amended to change the meeting start and end time from 8:00 a.m. to 6:00 p.m. to 10:00 a.m. to 7:00 p.m. The meeting is closed to the public.

Dated: October 3, 2024.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024–23221 Filed 10–7–24; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Heart, Lung, and Blood Institute; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Heart, Lung, and Blood Institute Special Emphasis Panel;

Mechanisms of Diabetic Cardiovascular Disease.

Date: November 4, 2024.

Time: 1:00 p.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge I, 6705 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Manoj Kumar Valiyaveetil, Ph.D., Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, National Institutes of Health, 6705 Rockledge Drive, Room 208–R, Bethesda, MD 20817, (301) 402–1616, email: manoj.valiyaveetil@nih.gov.

Name of Committee: National Heart, Lung, and Blood Institute Special Emphasis Panel; Catalyze Product Definition for Small Molecules and Biologics.

Date: November 6, 2024.

Time: 10:00 a.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge I, 6705 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Rajiv Kumar, Ph.D., Branch Chief, Blood and Vascular Branch, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, National Institutes of Health, 6705 Rockledge Drive, Room 208–W, Bethesda, MD 20892, 301–827–4612, email: rajiv.kumar@nih.gov.

Name of Committee: National Heart, Lung, and Blood Institute Special Emphasis Panel; NHLBI Support for Conferences and Scientific Meetings (R13).

Date: November 7, 2024.

Time: 10:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge I, 6705 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Cynthia D. Anderson, Ph.D., Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, National Institutes of Health, 6705 Rockledge Drive, Room 207–E, Bethesda, MD 20892, email: cynthia.anderson@nih.gov.

Name of Committee: National Heart, Lung, and Blood Institute Special Emphasis Panel; Scientific Opportunities For Exploratory Research.

Date: November 8, 2024.

Time: 10:00 a.m. to 2:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge I, 6705 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Sun Saret, Ph.D., Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, National Institutes of Health, 6705 Rockledge Drive, Room 208–S, Bethesda, MD 20892, (301) 435–0270, email: sun.saret@nih.gov.

Name of Committee: National Heart, Lung, and Blood Institute Special Emphasis Panel; Review for Research Education Program to Enhance Diversity in Health Related Research.

Date: November 8, 2024.

Time: 11:00 a.m. to 3:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge I, 6705 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Shelley Sehnert, Ph.D., Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, National Institutes of Health, 6705 Rockledge Drive, Suite 208–T, Bethesda, MD 20817, (301) 827–7984, email: ssehnert@nhlbi.nih.gov.

Name of Committee: National Heart, Lung, and Blood Institute Special Emphasis Panel; Clinical Trials SEP (UG3, U24).

Date: November 12, 2024.

Time: 12:00 p.m. to 4:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge I, 6705 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Zhihong Shan, Ph.D., MD, Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, National Institutes of Health, 6705 Rockledge Drive, Room 205–J, Bethesda, MD 20892, (301) 827–7085, email: zhishong.shan@nih.gov.

Name of Committee: National Heart, Lung, and Blood Institute Special Emphasis Panel; NHLBI Mentored Career Development K-Awards.

Date: November 14, 2024.

Time: 12:00 p.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge I, 6705 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Zhihong Shan, Ph.D., MD, Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, National Institutes of Health, 6705 Rockledge Drive, Room 205–J, Bethesda, MD 20892, (301) 827–7085, email: zhishong.shan@nih.gov.

Name of Committee: National Heart, Lung, and Blood Institute Special Emphasis Panel; Small Grant Program For NHLBI Award Recipients (R03).

Date: November 20, 2024.

Time: 10:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge I, 6705 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Susan Wohler Sunnarborg, Ph.D., Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, National Institutes of Health, 6705 Rockledge Drive, Room 208–Z, Bethesda, MD 20892, (301) 827–7987, email: susan.sunnarborg@nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.233, National Center for Sleep Disorders Research; 93.837, Heart and Vascular Diseases Research; 93.838, Lung Diseases Research; 93.839, Blood Diseases and Resources Research, National Institutes of Health, HHS)

Dated: October 2, 2024.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024–23122 Filed 10–7–24; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Nursing Research; Notice of Closed Meeting

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Nursing Research Special Emphasis Panel; Firearm Injury Prevention in Community Healthcare Settings.

Date: November 7, 2024.

Time: 10:30 a.m. to 4:30 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institute of Nursing Research, 6700B Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Annie Laurie McRee, Dr.PH., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 100, Bethesda, MD 20892, (301) 827–7396, mcreaal@csr.nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.361, Nursing Research, National Institutes of Health, HHS)

Dated: October 2, 2024.

Victoria E. Townsend,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024–23222 Filed 10–7–24; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Center for Complementary & Integrative Health; Notice of Closed Meeting

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Center for Complementary and Integrative Health; Special Emphasis Panel; Exploratory Clinical Trials of Mind and Body Interventions (MB).

Date: November 7–8, 2024.

Time: 1:00 p.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Center for Complementary and Integrative, Democracy II, 6707 Democracy Blvd., Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Mei Qin, MD, Ph.D., Scientific Review Officer, Office of Scientific Review, Division of Extramural Activities, NCCIH/NIH, 6707 Democracy Blvd., Suite 401, Bethesda, MD 20892, mei.qin@nih.gov.

Contact Person: MARTA V Hamity, Ph.D., Scientific Review Officer, Office of Scientific Review, Division of Extramural Activities, NCCIH/NIH, 6707 Democracy Boulevard, Suite 401, Bethesda, MD 20892, marta.hamity@nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.213, Research and Training in Complementary and Alternative Medicine, National Institutes of Health, HHS)

Dated: October 2, 2024.

Victoria E. Townsend,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024–23220 Filed 10–7–24; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; Notice of Closed Meeting

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel; Support for Research Excellence (SuRE) Award and SuRE-First Independent Research (SuRE-First) Award (R16 Clinical Trial Not Allowed).

Date: November 7, 2024.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institute of Allergy and Infectious Diseases, National Institutes of Health, 5601 Fishers Lane, Room 3F36, Rockville, MD 20892 (Video Assisted Meeting).

Contact Person: Noton K. Dutta, Ph.D., Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, National Institutes of Health, 5601 Fishers Lane, Room 3F36, Rockville, MD 20892, 240–669–2857, noton.dutta@nih.gov. (Catalogue of Federal Domestic Assistance Program Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: October 2, 2024.

Lauren A. Fleck,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024–23175 Filed 10–7–24; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Environmental Health Sciences; Notice of Closed Meeting

Pursuant to section 1009 of the Federal Advisory Committee Act, as

amended, notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Environmental Health Sciences Special Emphasis Panel; Member Conflict T32 Training Grant Review meeting.

Date: November 13, 2024.

Time: 1:30 p.m. to 3:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institute of Environmental Health Sciences, Keystone Building, 530 Davis Drive, Research Triangle Park, NC 27713.

Meeting Format: Virtual Meeting.

Contact Person: Murali Ganesan, Ph.D., Scientific Review Officer, Scientific Review Branch, Division of Extramural Research and Training (DERT), National Institute of Environmental Health Sciences, National Institutes of Health, Keystone Building, Room 3097, Research Triangle Park, NC 27713, Phone: 984-287-4674, Email: murali.ganesan@nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.115, Biometry and Risk Estimation—Health Risks from Environmental Exposures; 93.142, NIEHS Hazardous Waste Worker Health and Safety Training; 93.143, NIEHS Superfund Hazardous Substances—Basic Research and Education; 93.894, Resources and Manpower Development in the Environmental Health Sciences; 93.113, Biological Response to Environmental Health Hazards; 93.114, Applied Toxicological Research and Testing, National Institutes of Health, HHS)

Dated: October 2, 2024.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2024-23176 Filed 10-7-24; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR-6460-N-01]

Notice of Regulatory Waiver Requests Granted for the First Quarter of Calendar Year 2024

AGENCY: Office of the General Counsel, HUD.

ACTION: Notice.

SUMMARY: Section 106 of the Department of Housing and Urban Development Reform Act of 1989 (the HUD Reform Act) requires HUD to publish quarterly **Federal Register** notices of all regulatory waivers that HUD has approved. Each notice covers the quarterly period since the previous **Federal Register** notice. The purpose of this notice is to comply with the requirements of section 106 of the HUD Reform Act. This notice contains a list of regulatory waivers granted by HUD during the period beginning on January 1, 2024 and ending on March 31, 2024.

FOR FURTHER INFORMATION CONTACT: For general information about this notice, contact Aaron Santa Anna, Associate General Counsel for Legislation and Regulations, Department of Housing and Urban Development, 451 Seventh Street SW, Room 10276, Washington, DC 20410-0500, telephone 202-708-3055 (this is not a toll-free number). HUD welcomes and is prepared to receive calls from individuals who are deaf or hard of hearing, as well as individuals with speech or communication disabilities. To learn more about how to make an accessible telephone call, please visit: <https://www.fcc.gov/consumers/guides/telecommunications-relay-service-trs>.

For information concerning a particular waiver that was granted and for which public notice is provided in this document, contact the person whose name and address follow the description of the waiver granted in the accompanying list of waivers that have been granted in the first quarter of calendar year 2024.

SUPPLEMENTARY INFORMATION: Section 106 of the HUD Reform Act added a new section 7(q) to the Department of Housing and Urban Development Act (42 U.S.C. 3535(q)), which provides that:

1. Any waiver of a regulation must be in writing and must specify the grounds for approving the waiver;

2. Authority to approve a waiver of a regulation may be delegated by the Secretary only to an individual of Assistant Secretary or equivalent rank, and the person to whom authority to waive is delegated must also have authority to issue the particular regulation to be waived;

3. Not less than quarterly, the Secretary must notify the public of all waivers of regulations that HUD has approved, by publishing a notice in the **Federal Register**. These notices (each covering the period since the most recent previous notification) shall:

a. Identify the project, activity, or undertaking involved;

b. Describe the nature of the provision waived and the designation of the provision;

c. Indicate the name and title of the person who granted the waiver request;

d. Describe briefly the grounds for approval of the request; and

e. State how additional information about a particular waiver may be obtained.

Section 106 of the HUD Reform Act also contains requirements applicable to waivers of HUD handbook provisions that are not relevant to the purpose of this notice.

This notice follows procedures provided in HUD's Statement of Policy on Waiver of Regulations and Directives issued on April 22, 1991 (56 FR 16337). In accordance with those procedures and with the requirements of section 106 of the HUD Reform Act, waivers of regulations are granted by the Assistant Secretary with jurisdiction over the regulations for which a waiver was requested. In those cases in which a General Deputy Assistant Secretary granted the waiver, the General Deputy Assistant Secretary was serving in the absence of the Assistant Secretary in accordance with the office's Order of Succession.

This notice covers waivers of regulations granted by HUD from January 1, 2024 through March 31, 2024. For ease of reference, the waivers granted by HUD are listed by HUD program office (for example, the Office of Community Planning and Development, the Office of Fair Housing and Equal Opportunity, the Office of Housing, and the Office of Public and Indian Housing, etc.). Within each program office grouping, the waivers are listed sequentially by the regulatory section of title 24 of the Code of Federal Regulations (CFR) that is being waived. For example, a waiver of a provision in 24 CFR part 58 would be listed before a waiver of a provision in 24 CFR part 570.

Where more than one regulatory provision is involved in the grant of a particular waiver request, the action is listed under the section number of the first regulatory requirement that appears in 24 CFR and that is being waived. For example, a waiver of both § 58.73 and § 58.74 would appear sequentially in the listing under § 58.73.

Waiver of regulations that involve the same initial regulatory citation are in time sequence beginning with the earliest-dated regulatory waiver.

Should HUD receive additional information about waivers granted during the period covered by this report (the first quarter of calendar year 2024) before the next report is published (the

second quarter of calendar year 2024), HUD will include any additional waivers granted for the first quarter in the next report.

Accordingly, information about approved waiver requests pertaining to HUD regulations is provided in the Appendix that follows this notice.

Benjamin B. Klubes,
Principal Deputy General Counsel.

APPENDIX

Listing of Waivers of Regulatory Requirements Granted by Offices of the Department of Housing and Urban Development January 1, 2024 through March 31, 2024

Note to Reader: More information about the granting of these waivers, including a copy of the waiver request and approval, may be obtained by contacting the person whose name is listed as the contact person directly after each set of regulatory waivers granted.

The regulatory waivers granted appear in the following order:

- I. Regulatory waivers granted by the Office of Community Planning and Development.
- II. Regulatory waivers granted by the Office of Housing.
- III. Regulatory waivers granted by the Office of Public and Indian Housing.

I. Regulatory Waivers Granted by the Office of Community Planning and Development

For further information about the following regulatory waivers, please see the name of the contact person that immediately follows the description of the waiver granted.

- **Regulation:** 24 CFR 92.252(d)(1).
Project/Activity: Los Angeles, California, requested a waiver of 24 CFR 92.252(d)(1) to allow the use of the utility allowance established by the local public housing agency (PHA) for Beswick Senior Apartments, a HOME-assisted project.

Nature of Requirement: The regulation at 24 CFR 92.252(d)(1) requires participating jurisdictions to establish maximum monthly allowances for utilities and services (excluding telephone) and update allowances annually. However, participating jurisdictions are not permitted to use the utility allowance established by the local public housing authority for HOME-assisted rental projects for which HOME funds were committed on or after August 23, 2013.

Granted by: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: January 30, 2024.

Reason Waived: The HOME requirements for establishing utility allowances conflict with Project Based Voucher program requirements. It is not possible to use two different utility allowances to set the rent for a single unit and it is administratively burdensome to require a project owner to establish and implement different utility allowances for HOME-assisted and non-HOME assisted units in a project.

Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of Community Planning and Development, Department of Housing and Urban

Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

- **Regulation:** 24 CFR 92.252(d)(1).

Project/Activity: Sunnyvale and Santa Clara County, California, requested waivers of 24 CFR 92.252(d)(1) to allow the use of the utility allowance established by the local public housing agency (PHA) for the Block 15 project, designated as IDIS activities #624 (Sunnyvale) and #1859 (Santa Clara County).

Nature of Requirement: The regulation at 24 CFR 92.252(d)(1) requires participating jurisdictions to establish maximum monthly allowances for utilities and services (excluding telephone) and update allowances annually. However, participating jurisdictions are not permitted to use the utility allowance established by the local public housing authority for HOME-assisted rental projects for which HOME funds were committed on or after August 23, 2013.

Granted by: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: March 8, 2024.

Reason Waived: The HOME requirements for establishing utility allowances conflict with Project Based Voucher program requirements. It is not possible to use two different utility allowances to set the rent for a single unit and it is administratively burdensome to require a project owner to establish and implement different utility allowances for HOME-assisted and non-HOME assisted units in a project.

Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

- **Regulation:** 24 CFR 92.252(d)(1).

Project/Activity: Clark County, Nevada, requested a waiver of 24 CFR 92.252(d)(1) to allow the use of the utility allowance established by the local public housing agency (PHA) for the Southern Pines 2 project.

Nature of Requirement: The regulation at 24 CFR 92.252(d)(1) requires participating jurisdictions to establish maximum monthly allowances for utilities and services (excluding telephone) and update allowances annually. However, participating jurisdictions are not permitted to use the utility allowance established by the local public housing authority for HOME-assisted rental projects for which HOME funds were committed on or after August 23, 2013.

Granted by: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: March 27, 2024.

Reason Waived: The HOME requirements for establishing utility allowances conflict with Project Based Voucher program requirements. It is not possible to use two different utility allowances to set the rent for a single unit and it is administratively burdensome to require a project owner to establish and implement different utility allowances for HOME-assisted and non-HOME assisted units in a project.

Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of

Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

- **Regulation:** 24 CFR 93.400(d)(2).

Project/Activity: The State of Hawaii requested a waiver of 24 CFR 93.400(d)(2) to extend the expenditure deadline for its Fiscal Year 2018 grant funds which are currently committed to the Kaloko Heights project.

Nature of Requirement: The regulation at 24 CFR 93.400(d)(2) requires HUD to reduce or recapture any funds in the grantee's HTF Treasury account that are not expended within five years after HUD executed the grantee's HTF grant agreement.

Granted by: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: February 23, 2024.

Reason Waived: The Department determined that a waiver of the State's FY 2018 HTF expenditure requirement is justified based on construction delays. This waiver will ensure that \$1,350,000 of HTF funds are not deobligated and that the State has sufficient resources to complete the construction of the Kaloko Heights project, which will provide needed affordable rental housing units.

Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

- **Regulation:** 24 CFR 93.400(d)(2).

Project/Activity: The State of Texas requested a waiver of 24 CFR 93.400(d)(2) to extend the expenditure deadline for its Fiscal Year 2017 grant funds which are committed to the Heritage Heights project.

Nature of Requirement: The regulation at 24 CFR 93.400(d)(2) requires HUD to reduce or recapture any funds in the grantee's HTF Treasury account that are not expended within five years after HUD executed the grantee's HTF grant agreement.

Granted by: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: March 8, 2024.

Reason Waived: The Department determined that a waiver of the State's FY 2017 expenditure requirement is justified because unanticipated delays in project construction prevented the State from expending all of the HTF funds committed to the project before the five-year expenditure deadline. This waiver will enable the State to retain HTF funds committed to the Heritage Heights project and prevent the potential loss of affordable units.

Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

- **Regulation:** 24 CFR 92.252(d)(1).

Project/Activity: Los Angeles, California, requested a waiver of 24 CFR 92.252(d)(1) to allow the use of the utility allowance

established by the local public housing agency (PHA) for Beswick Senior Apartments, a HOME-assisted project.

Nature of Requirement: The regulation at 24 CFR 92.252(d)(1) requires participating jurisdictions to establish maximum monthly allowances for utilities and services (excluding telephone) and update allowances annually. However, participating jurisdictions are not permitted to use the utility allowance established by the local public housing authority for HOME-assisted rental projects for which HOME funds were committed on or after August 23, 2013.

Granted by: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: January 30, 2024.

Reason Waived: The HOME requirements for establishing utility allowances conflict with Project Based Voucher program requirements. It is not possible to use two different utility allowances to set the rent for a single unit and it is administratively burdensome to require a project owner to establish and implement different utility allowances for HOME-assisted and non-HOME assisted units in a project.

Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

• **Regulation:** 24 CFR 92.252(d)(1).

Project/Activity: Sunnyvale and Santa Clara County, California, requested waivers of 24 CFR 92.252(d)(1) to allow the use of the utility allowance established by the local public housing agency (PHA) for the Block 15 project, designated as IDIS activities #624 (Sunnyvale) and #1859 (Santa Clara County).

Nature of Requirement: The regulation at 24 CFR 92.252(d)(1) requires participating jurisdictions to establish maximum monthly allowances for utilities and services (excluding telephone) and update allowances annually. However, participating jurisdictions are not permitted to use the utility allowance established by the local public housing authority for HOME-assisted rental projects for which HOME funds were committed on or after August 23, 2013.

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Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

• **Regulation:** 24 CFR 92.252(d)(1).

Project/Activity: Clark County, Nevada, requested a waiver of 24 CFR 92.252(d)(1) to allow the use of the utility allowance established by the local public housing agency (PHA) for the Southern Pines 2 project.

Nature of Requirement: The regulation at 24 CFR 92.252(d)(1) requires participating jurisdictions to establish maximum monthly allowances for utilities and services (excluding telephone) and update allowances annually. However, participating jurisdictions are not permitted to use the utility allowance established by the local public housing authority for HOME-assisted rental projects for which HOME funds were committed on or after August 23, 2013.

Granted by: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: March 27, 2024.

Reason Waived: The HOME requirements for establishing utility allowances conflict with Project Based Voucher program requirements. It is not possible to use two different utility allowances to set the rent for a single unit and it is administratively burdensome to require a project owner to establish and implement different utility allowances for HOME-assisted and non-HOME assisted units in a project.

Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

• **Regulation:** 24 CFR 93.400(d)(2).

Project/Activity: The State of Hawaii requested a waiver of 24 CFR 93.400(d)(2) to extend the expenditure deadline for its Fiscal Year 2018 grant funds which are currently committed to the Kaloko Heights project.

Nature of Requirement: The regulation at 24 CFR 93.400(d)(2) requires HUD to reduce or recapture any funds in the grantee's HTF Treasury account that are not expended within five years after HUD executed the grantee's HTF grant agreement.

Granted by: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: February 23, 2024.

Reason Waived: The Department determined that a waiver of the State's FY 2018 HTF expenditure requirement is justified based on construction delays. This waiver will ensure that \$1,350,000 of HTF funds are not deobligated and that the State has sufficient resources to complete the construction of the Kaloko Heights project, which will provide needed affordable rental housing units.

Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

• **Regulation:** 24 CFR 93.400(d)(2).

Project/Activity: The State of Texas requested a waiver of 24 CFR 93.400(d)(2) to extend the expenditure deadline for its Fiscal Year 2017 grant funds which are committed to the Heritage Heights project.

Nature of Requirement: The regulation at 24 CFR 93.400(d)(2) requires HUD to reduce or recapture any funds in the grantee's HTF Treasury account that are not expended within five years after HUD executed the grantee's HTF grant agreement.

Granted by: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: March 8, 2024.

Reason Waived: The Department determined that a waiver of the State's FY 2017 expenditure requirement is justified because unanticipated delays in project construction prevented the State from expending all of the HTF funds committed to the project before the five-year expenditure deadline. This waiver will enable the State to retain HTF funds committed to the Heritage Heights project and prevent the potential loss of affordable units.

Contact: Virginia Sardone, Director, Office of Affordable Housing Programs, Office of Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7160, Washington, DC 20410, telephone (202) 708-2684.

• **Regulation:** 24 CFR 576.106(d)(1).

Project/Activity: HUD granted a waiver of 24 CFR 576.106(d)(1) to the New York State Office of Temporary and Disability Assistance (OTDA) to allow its subrecipients use Fiscal Year (FY) 2022 and 2023 Emergency Solutions Grants (ESG) Program Rapid Re-housing (RRH) and Homelessness Prevention (HP) funds for housing units with rents that exceed the HUD-established Fair Market Rent (FMR) requirements in the following areas: Albany County, Cattaraugus County, Chautauqua County, Columbia County, Delaware County, Dutchess County, Erie County, Essex County, Franklin County, Fulton County, Greene County, Kings County, Lewis County, Madison County, Monroe County, Montgomery County, New York City, Onondaga County, Ontario County, Orange County, Putnam County, Rensselaer County, Saratoga County, Schuyler County, Seneca County, St. Lawrence County, Sullivan County, Tompkins County, Ulster County, Washington County, Wayne County, Westchester County and Yates County. OTDA and its subrecipients must still comply with the rent reasonableness requirements in 24 CFR 576.106(d)(1). Subject to funding availability and unless otherwise provided by HUD, the State may also apply this waiver to further ESG grants under the same conditions that are stated above for the State of New York's FY 2022 (E22DC360001), and FY 2023 (E23DC360001) grants.

Nature of Requirement: 24 CFR 576.106(d)(1) provides that rental assistance cannot be provided unless the total rent is equal to or less than the FMR established by HUD, as provided under 24 CFR part 888, and complies with HUD's standard of rent reasonableness, as established under 24 CFR 982.507.

Granted By: Marion M. McFadden, Principal Deputy Assistant Secretary for Community Planning and Development.

Date Granted: January 31, 2024.

Reason Waived: Because ESG rental assistance is time-limited, and program participants must find other rental assistance or pay the full rent to stay housed at the program's end, HUD's FMR-based restriction in 24 CFR 576.106(d)(t) serves dually as safeguard and benchmark for successful housing placements. In some cases, though, allowing rental assistance only in units that rent at or below HUD's FMR can impede rather than promote the efficient use of ESG assistance. In this case, HUD has received information showing the current FMR is not an accurate reflection of the rental market in affected areas identified by the recipient. The state reports that average rents are consistently higher than FMR limits for the affected areas. OTDA provided data showing that, on average, communities report actual rents 28.7 percent higher than FY 2023 FMRs. Average rents as of November 2023 are still 21 percent higher than current FY 2024 FMRs. Average rent amounts for one-bedroom units range from 1.0 percent greater than FMR in Putnam County, NY to 5.1 percent greater than FMR in Onondaga County, NY. Average rent amounts for two-bedroom units in the affected areas range from 1.1 percent greater than FMR in St. Lawrence County, NY to 91.2 percent greater than FMR in Onondaga County, NY. Because renting at any amount over FMR disqualifies a unit as an eligible option for ESG assistance, these consistently higher-than-FMR average rent amounts, coupled with a tight rental market, continue to hamper the network of providers in their ability to provide permanent housing solutions to households in crisis. In circumstances like these, the costs of the FMR-based restriction seem to outweigh its benefits due to the challenge of finding units that meet FMR requirements.

Contact: Norm Suchar, Director, Office of Special Needs Assistance Programs, Office of Community Planning and Development, Department of Housing and Urban Development, 451 Seventh Street SW, Room 7262, Washington, DC 20410, telephone number (202) 708-4300.

II. Regulatory Waivers Granted by the Office of Housing—Federal Housing Administration (FHA)

For further information about the following regulatory waivers, please see the name of the contact person that immediately follows the description of the waiver granted.

- **Regulation:** 24 CFR 200.24.

Project/Activity: Blanket Partial Waiver for Cooperative Manufactured Housing Park Projects insured under Section 223(f) Program.

Nature of Requirement: Currently this regulation does not allow the purchase of cooperative manufactured housing parks. HUD's regulation limits Section 223(f) to refinancing the existing debt of an existing cooperative projects.

Granted By: Julia R. Gordon, Assistant Secretary for Housing and Federal Housing Commissioner.

Date Granted: March 1, 2024.

Reason Waived: Granting the regulation waiver will permit acquisition of cooperative manufactured housing parks, which will

increase the options for existing residents to buy their manufactured home community when it comes up for sale. Currently the financing options in the industry are limited for purchasing cooperative manufactured home parks. Because of the affordable housing crisis, now is a crucial time to support a secondary market for resident owned community financing.

Contact: Willie Fobbs, III, Director, Multifamily Production, Office of Housing, Department of Housing and Urban Development, 451 Seventh Street SW, Room 6138, Washington, DC 20410, telephone (202) 402-6257.

- **Regulation:** 24 CFR 200.54(b).

Project/Activity: Waldorf Technology Park, Baltimore, Maryland.

Nature of Requirement: The regulation states that funds provided by the borrower must be disbursed in full for project work before the disbursement of any mortgage proceeds.

Granted By: Julia R. Gordon, Assistant Secretary for Housing and Federal Housing Commissioner.

Date Granted: January 31, 2024.

Reason Waived: This partial waiver grants the timely issuance of securities guaranteed by the Government National Mortgage Association (GNMA) and is limited to the Waldorf Technology Park project to allow lenders to securitize the initial draw (advance of mortgage proceeds). The initial draw is made contemporaneously with borrower equity funding to establish the mortgage-backed security and fulfill investor trade agreements. The initial draw will not exceed half percent (0.5%) of the initially endorsed loan amount. In practice, this initial draw is typically \$25,000.

Contact: Willie Fobbs, III, Director, Multifamily Production, Office of Housing, Department of Housing and Urban Development, 451 Seventh Street SW, Room 6138, Washington, DC 20410, telephone (202) 402-6257.

- **Regulation:** 24 CFR 290.30 (a).

Project/Activity: The owner of New Orchard Hill Estates, located in Oxford, Massachusetts, requests HUD approval of the note sale of two HUD-held mortgages secured by the project to Massachusetts Housing Finance Agency (MassHousing) on a non-competitive, negotiated basis.

Nature of Requirement: HUD is required to sell HUD-held Notes on a competitive basis pursuant to 24 CFR 290.30(a). However, as an exception to this requirement, 24 CFR 290.31(a)(2), permits "negotiated" sales to state of local governments for current mortgages securing subsidized projects, provided that loans are sold with FHA insurance.

Granted By: Julia R. Gordon, Assistant Secretary for Housing and Federal Housing Commissioner.

Date Granted: March 28, 2024, subject to OMB approval.

Reason Waived: To facilitate the sale of the two HUD-held Notes a waiver of 24 CFR 290.30(a), which requires the HUD-held multifamily mortgages to be sold competitively, is needed. This waiver will allow HUD to accept the non-competitive bid made by MassHousing and the sale of the

notes will remove liens that have accrued to over \$27 million dollars combined. Further, granting this waiver facilitates the preservation of this affordable housing. The waiver of 24 CFR 290.30(a) does not violate any statutory requirements, and the review findings constitute good cause for the waiver, as required by 24 CFR 5.110.

Contact: Thomas R. Davis, Director of Office of Recapitalization, Office of Housing, Department of Housing and Urban Development, 451 Seventh Street SW, Room 6228, Washington, DC 20410, telephone (202) 402-7549.

III. Regulatory Waivers Granted by the Office of Public and Indian Housing

For further information about the following regulatory waivers, please see the name of the contact person that immediately follows the description of the waiver granted.

- **Regulation:** 24 CFR 982.503(c)(2), 24 CFR 982.503(c)(3).

Nature of Requirement: 24 CFR 982.503(c)(2) defines payment standards between 110–120 percent of fair market rent, while 24 CFR 982.503(c)(3) defines payment standards above 120 percent of fair market rent.

Project/Activity: Metropolitan Development and Housing Agency (MDHA).

Granted By: Richard Monocchio, Principal Deputy Assistant Secretary for Public and Indian Housing.

Date Granted: December 28, 2023.

Reason Waived: The PHA has demonstrated it met all the regulatory requirements at 24 CFR 982.503(c) for approval of exception payment standards between 110 and 120 percent of the FMR and for approval of exception payment standards over 120 percent. The PHA may use the approved exception payment standards contained in the waiver request in place of the fiscal year (FY) 24 published FMRs. If MDHA wants to continue with exception payment standard requests for HUD's consideration for FY25 FMRs, the PHA must submit a new exception payment standard request.

Contact: Brendan Goodwin, Senior Housing Program Specialist, Office of Public and Indian Housing, Department of Housing and Urban Development, 10 Causeway St., #3, Boston, MA 02222, telephone (202) 402-4398; brendan.c.goodwin@hud.gov.

- **Regulation:** 24 CFR 5.801(d)(1) and 24 CFR 902.62(a)(3).

Nature of Requirement: 24 CFR 5.801(d)(1) requires agencies are to submit their audited financial statements no later than nine months after their FYE; 24 CFR 902.62(a)(3) dictates that agencies receive an LPF score of zero should they fail to meet the deadline described in 24 CFR 5.801(d)(1).

Project/Activity: West Palm Beach Housing Authority (WPBHA).

Granted By: Richard Monocchio, Principal Deputy Assistant Secretary for Public and Indian Housing.

Date Granted: January 31, 2024.

Reason Waived: WPBHA indicates there are unforeseen circumstances affecting a timely submission of the FYE March 31, 2023, audited financial information to the Department of Housing and Urban

Development (HUD). WPBHA's Finance Director was diagnosed with a serious health condition in August 2023. As a result of this unforeseen circumstance and the critical role of the Finance Director in the audit process, WPBHA requests an additional 30 days. HUD found this to be good cause and waived the aforementioned regulations.

Contact: Lara Philbert, Assessment Manager, Integrated Assessment Team, Office of Public and Indian Housing, Department of Housing and Urban Development, 451 Seventh Street SW, Washington, DC 20410, telephone (202) 475-8930; lara.philbert@hud.gov.

- **Regulation:** 24 CFR 983.51(b)(1).

Nature of Requirement: 24 CFR 983.51(b)(1) pertains to PHAs selecting projects for project-based voucher (PBV) assistance via competitive process or based on a previous competition.

Project/Activity: Housing Authority of the City of Texarkana/(D(B)(A) Village Communities of Texarkana, Texas (VCTT).

Granted By: Richard Monocchio, Principal Deputy Assistant Secretary for Public and Indian Housing.

Date Granted: February 6, 2023.

Reason Waived: Without approval of this waiver request, the project in question will not be able to close, putting this unique and much-needed affordable housing resource at risk. Allowing VCTT to select the project in accordance with the requested waiver ensures that the transaction to preserve the property as an affordable housing resource in the community will be completed and prevents the displacement of the 20 families. HUD found this to be good cause and waived the aforementioned regulations.

Contact: Nathaniel Johnson, Senior Housing Program Specialist, Office of Public and Indian Housing, Department of Housing and Urban Development, 451 Seventh Street SW, Washington, DC 20410, telephone (202) 402-5156; Nathaniel.Johnson@hud.gov.

- **Regulation:** 24 CFR 983.202(a) and 983.3(b).

Nature of Requirement: 24 CFR 983.202(a) states that a Public Housing Agency (PHA) must enter a single Housing Assistance Payments (HAP) contract with the project owner. Except for a single-family scattered site project, a HAP contract shall cover a single project. If multiple projects exist, each project shall be covered by a separate HAP contract. The HAP contract must be in such a form as may be prescribed by HUD. 24 CFR 983.3(b) defines such a project as a single building, multiple contiguous buildings, or multiple buildings on contiguous parcels of land. Contiguous in this definition includes "adjacent to," as well as touching along a boundary or a point.

Project/Activity: New York City Housing Authority (NYCHA).

Granted By: Richard Monocchio, Principal Deputy Assistant Secretary for Public and Indian Housing.

Date Granted: March 18, 2024.

Reason Waived: NYCHA has provided the following justifications: The NYCHA PACT program seeks to identify resources and opportunities to make major improvements to projects, while preserving long-term affordability and maintaining strong resident

rights. The combination of subsidy conversion types is necessary to produce the rental revenue necessary to adequately address the preservation required by the project's capital needs and to maximize the number of units and residents who will benefit from the Redevelopment Plan. NYCHA staff must perform separate record keeping and administrative functions at the execution of the HAP contract and during the rehabilitation of the units, as well as ongoing monthly and annual administration. NYCHA's Leased Housing Department estimates that each individual HAP contract requires approximately 27 staff hours to administer during construction to convert units to PBV and manage RAD rental rehab payments, re-occupancies, and temporary moves. Grouping the buildings and reducing the number of HAP contracts will allow NYCHA to realize significant operational efficiencies, reduce administrative burden, and overcome potential confusion from administrative complexity. Since Manhattan's densely populated residential neighborhoods, these non-contiguous buildings are physically very close and have, since acquisition by NYCHA, been operated as a single project. HUD found this to be good cause and waived the aforementioned regulations.

Contact: Jerone Anderson, Recapitalization Transaction Specialist, Office of Public and Indian Housing, Department of Housing and Urban Development, 451 Seventh Street SW, Washington DC 20410, telephone (202) 402-6709; Jerone.I.anderson@hud.gov.

- **Regulation:** 24 CFR 983.302(b)(2), 24 CFR 983.302(e)(2).

Nature of Requirement: 24 CFR 983.302(b)(2) requires that an owner of a property subject to a project-based voucher (PBV) Housing Assistance Payments (HAP) contract must request by written notice to the public housing agency (PHA) an increase in the rent at the annual anniversary of the HAP contract. 24 CFR 983.302(e)(2) states that an adjusted rent to owner amount applies for the period of 12 calendar months from the annual anniversary of the HAP contract.

Project/Activity: Dane County Housing Authority's (DCHA).

Granted By: Richard Monocchio, Principal Deputy Assistant Secretary for Public and Indian Housing.

Date Granted: January 12, 2024.

Reason Waived: The DCHA only requested for 24 CFR 983.302(b)(2) to be waived but HUD determined 24 CFR 983.302(e)(2) would need to be waived as well to address DHCA's needs and request. The DHEA asserted there is good cause for the requested waiver since there is a risk that these two properties may not be preserved as affordable housing unless the financial circumstances of the properties improve and stabilize. If these properties are not preserved as affordable housing, it would create an unreasonable burden on the many formerly homeless families currently living in the properties. The DCHA believes many of the families would struggle to find replacement housing. HUD found this to be good cause and waived the aforementioned regulations.

Contact: Melissa West, Senior Housing Program Specialist, Office of Public and

Indian Housing, Department of Housing and Urban Development, 1670 Broadway Denver, Colorado 80202, telephone (303) 672-5352; melissa.west@hud.gov.

- **Regulation:** 24 CFR 982.617(b) and 982.617(c).

Nature of Requirement: 24 CFR 982.617(b) provides for using a pro-rata formula when determining rent reasonableness in shared housing units. 24 CFR 982.617(c) establishes payment standards for all participants receiving assistance under the Housing Choice Voucher program.

Project/Activity: Los Angeles County Development Authority (LACDA).

Granted By: Richard Monocchio, Principal Deputy Assistant Secretary for Public and Indian Housing.

Date Granted: February 6, 2024.

Reason Waived: LACDA has demonstrated that the rental market for smaller-sized units is especially difficult in the County of Los Angeles. While the good cause is primarily based on the need to address the homelessness crisis in the Los Angeles area, this waiver is applicable to all HCV families, not just persons experiencing homelessness. Expanding the shared housing option for the program will increase available housing options for smaller-size voucher households, reducing some voucher holder demand for the very limited supply of efficiencies and one-bedroom units. This will provide persons experiencing homelessness with a higher overall likelihood of housing search success, whether through the shared housing option or a regular unit. HUD found this to be good cause and waived the aforementioned regulations.

Contact: Brendan Goodwin, Senior Housing Program Specialist, Office of Public and Indian Housing, Department of Housing and Urban Development, 10 Causeway St #3, Boston, MA 02222, telephone (202) 402-4398; brendan.c.goodwin@hud.gov.

- **Regulation:** 24 CFR 982.617(b) and 982.617(c).

Nature of Requirement: 24 CFR 982.617(b) provides for using a pro-rata formula when determining rent reasonableness in shared housing units. 24 CFR 982.617(c) establishes payment standards for all participants receiving assistance under the Housing Choice Voucher program.

Project/Activity: Housing Authority of the City of Los Angeles (HACLA).

Granted By: Richard Monocchio, Principal Deputy Assistant Secretary for Public and Indian Housing.

Date Granted: February 6, 2024.

Reason Waived: HACLA has demonstrated that the rental market for smaller-sized units is especially difficult in Los Angeles. While the good cause is primarily based on the need to address the homelessness crisis in Los Angeles, this waiver is applicable to all HCV families, not just persons experiencing homelessness. Expanding the shared housing option for the program will increase available housing options for smaller size voucher households, reducing some voucher holder demand for the very limited supply of efficiencies and one-bedroom units. This will provide persons experiencing homelessness with a higher overall likelihood of housing search success, whether through the shared

housing option or a regular unit. HUD finds this to be good cause and hereby waives the aforementioned regulations.

Contact: Brendan Goodwin, Senior Housing Program Specialist, Office of Public and Indian Housing, Department of Housing and Urban Development, 10 Causeway St #3, Boston, MA 02222, telephone (202) 402-4398; brendan.c.goodwin@hud.gov.

- **Regulation:** 24 CFR 983.51(b)(1).

Nature of Requirement: 24 CFR 983.51(b)(1) pertains to PHAs selecting projects for project-based voucher (PBV) assistance via competitive process or based on a previous competition.

Project/Activity: Tatum Housing Authority (THA).

Granted By: Richard Monocchio, Principal Deputy Assistant Secretary for Public and Indian Housing.

Date Granted: February 16, 2024.

Reason Waived: The THA stated that the requested waiver is critical to preserving affordable housing in Gladewater, Texas, which has limited affordable housing. Without approval of this waiver request, the project will not be able to close, putting this unique and much-needed affordable housing resource at risk. Allowing the THA to select the project in accordance with the 2 requested waiver ensures that the property is

preserved as an affordable housing resource in the community. HUD found this to be good cause and waived the aforementioned regulation.

Contact: Nathaniel Johnson, Senior Housing Program Specialist, Housing Voucher Management and Operations Division, Office of Public and Indian Housing, Department of Housing and Urban Development, 451 Seventh Street SW, Washington, DC 20410, telephone (202) 402-5156; Nathaniel.Johnson@hud.gov.

Extended Streamlined Waivers

- **Regulation:** 24 CFR 982.505(c)(4) Increase in Payment Standard During Housing Assistance Payment (HAP) Contract Term.

Project/Activity: Notice PIH 2023–29 Extension of Certain Regulatory Waivers for the Housing Choice Voucher (including Mainstream) Program and Streamlined Review Process.

Nature of Requirement: If the payment standard amount is increased during the term of the HAP contract, the increased payment standard amount shall be used to calculate the monthly housing assistance payment for the family beginning at the effective date of the family's first regular reexamination on or after the effective date of the increase in the payment standard amount.

Reason Waived: The PHAs were authorized to increase the payment standards for families at any time after the effective date of the payment standard increase, rather than waiting for the next regular reexamination. These waivers were approved consistent with the streamlined regulatory waiver process in Notice PIH 2023–29, which allowed PHAs to request regulatory waivers that would assist PHAs in responding to ongoing fluctuations and disruptions in the rental market by providing more flexibility with establishing and applying payment standards. These waivers were provided to the PHAs because allowing for earlier implementation of increased payment standards for families helped ensure that families living in rental markets with ongoing fluctuations and disruptions were not adversely impacted by rapidly increasing rents.

Granted by: Dominique Blom, General Deputy Assistant for Public and Indian Housing.

Contact: Tesia Anyanaso, Office of Field Operations/Coordination and Compliance Division, Office of Public and Indian Housing 451 Seventh Street SW, Suite 3180, Washington, DC 20410, telephone (202) 402-7026 or email to PIH_Expedited_Waivers@hud.gov.

Code	PHAs	Waiver signed
AL008	Selma Housing Authority	2/22/2024
CA007	County of Sacramento Housing Authority	1/31/2024
CA033	County of Monterey Housing Authority	1/31/2024
CA055	Housing Authority of the City of Vallejo	3/14/2024
FL032	Ocala Housing Authority	1/3/2024
FL068	Housing Authority of the City of Homestead	1/9/2024
IA045	Davenport Housing Commission	1/3/2024
IL124	Housing Authority of East Peoria	2/22/2024
IN004	Delaware County Housing Authority	1/9/2024
IN005	Housing Authority of the City of Muncie	2/22/2024
IN006	Housing Authority of the City of Anderson	2/9/2024
IN009	Housing Authority of the City of Richmond	2/9/2024
IN011	Housing Authority of the City of Gary	1/31/2024
IN019	Housing Authority of the City of Michigan City	3/14/2024
IN020	Housing Authority of the City of Mishawaka	1/9/2024
IN025	Housing Authority of the City of Charlestown	2/9/2024
IN047	Housing Authority of the City of Crawfordsvil	1/3/2024
IN050	New Castle Housing Authority	1/31/2024
IN078	Housing Authority of the City of Greensburg	1/31/2024
IN086	Housing Authority of the City of Union City	1/9/2024
IN091	Housing Authority of the City of Peru	2/22/2024
IN901	Indiana Housing and Community Development	1/3/2024
MO227	Housing Assistance Prog of St Charles County	1/31/2024
NE181	Goldenrod Regional Housing Agency	1/9/2024
NH009	Lebanon Housing Authority	3/6/2024
NY009	Albany Housing Authority	3/6/2024
NY406	Village of Fairport	2/22/2024
OH029	Ashtabula Metropolitan Housing Authority	1/31/2024
PA047	Wilkes Barre Housing Authority	1/31/2024
RQ013	Municipality of Trujillo Alto	3/14/2024
SC028	Housing Authority of Georgetown	3/6/2024
TN026	Etowah Housing Authority	2/22/2024
TN054	Cleveland Housing Authority	1/3/2024
TN062	Dayton Housing Authority	1/31/2024
TX512	Deep East Texas Council of Governments	1/31/2024
UT028	Roosevelt City Housing Authority	2/22/2024
WI206	Door County Housing Authority	1/31/2024

• **Regulation:** 24 CFR 982.503(b)(1)(iv) Exception Payment Standards up to 120% of

the SAFMRs for PHAs that are in mandatory SAFMR area or Opt-in PHAs.

Project/Activity: Notice PIH 2023–29 Extension of Certain Regulatory Waivers for

the Housing Choice Voucher (including Mainstream) Program and Streamlined Review Process.

Nature of Requirement: At the request of a PHA administering the HCV program under Small Area FMRs, HUD may approve an exception payment standard for a Small Area FMR area above the 110 percent of the published FMR in accordance with conditions set forth by Notice in the **Federal Register**.

Reason Waived: The PHAs were authorized to adopt a payment standard above the basic range, up to 120 percent of the Small Area

FMR. These waivers were approved consistent with the streamlined regulatory waiver process in Notice PIH 2023–29, which allowed PHAs to request regulatory waivers that would assist PHAs in responding to ongoing fluctuations and disruptions in the rental market by providing more flexibility with establishing and applying payment standards. These waivers were provided to the PHAs because allowing for an exception payment standard up to 120 percent of the Small Area FMR helped ensure that families living in rental markets with ongoing fluctuations and disruptions were not

adversely impacted by rapidly increasing rents and were able to find rental units with their voucher.

Granted by: Dominique Blom, General Deputy Assistant for Public and Indian Housing.

Contact: Tesia Anyanaso, Office of Field Operations/Coordination and Compliance Division, Office of Public and Indian Housing 451 Seventh Street SW, Suite 3180, Washington, DC 20410, telephone (202) 402–7026 or email to PIH_Expedited_Waivers@hud.gov.

PUBLIC HOUSING AUTHORITIES (PHAs)

Code	PHAs	Waiver signed
AZ038	Chandler Housing Authority	2/9/2024
CA007	County of Sacramento Housing Authority	1/31/2024
CA033	County of Monterey Housing Authority	1/31/2024
IN011	Housing Authority of the City of Gary	1/31/2024
IN086	Housing Authority of the City of Union City	1/9/2024
IN901	Indiana Housing and Community Development	1/3/2024
PA015	Fayette County Housing Authority	1/31/2024
TN054	Cleveland Housing Authority	1/3/2024
UT016	Housing Authority of Carbon County	1/9/2024

• **Regulation:** 24 CFR 982.503(c)(1)–(2) and (4)–(5) Exception Payment Standards up to 120% of the FMR.

Project/Activity: Notice PIH 2023–29 Extension of Certain Regulatory Waivers for the Housing Choice Voucher (including Mainstream) Program and Streamlined Review Process.

Nature of Requirement: PHAs may request an exception payment standard of up to 120 percent of the applicable Fair Market Rent and apply it throughout their jurisdiction.

Reason Waived: The PHAs were authorized to adopt a payment standard above the basic range, up to 120 percent of the Fair Market

Rent, and apply it throughout their jurisdiction. These waivers were approved consistent with the streamlined regulatory waiver process in Notice PIH 2023–29, which allowed PHAs to request regulatory waivers that would assist PHAs in responding to ongoing fluctuations and disruptions in the rental market by providing more flexibility with establishing and applying payment standards. These waivers were provided to the PHAs because allowing for an exception payment standard up to 120 percent of the Small Area FMR helped ensure that families living in rental markets with ongoing fluctuations and disruptions were not

adversely impacted by rapidly increasing rents and were able to find rental units with their voucher.

Granted by: Dominique Blom, General Deputy Assistant for Public and Indian Housing.

Contact: Tesia Anyanaso, Office of Field Operations/Coordination and Compliance Division, Office of Public and Indian Housing 451 Seventh Street SW, Suite 3180, Washington, DC 20410, telephone (202) 402–7026 or email to PIH_Expedited_Waivers@hud.gov.

Code	PHAs	Waiver signed
AL008	Selma Housing Authority	2/22/2024
AR020	Little River County Housing Authority	1/31/2024
AR197	White River Regional Housing Authority	1/31/2024
CA033	County of Monterey Housing Authority	1/31/2024
CA055	Housing Authority of the City of Vallejo	3/14/2024
CA086	County of Humboldt Housing Authority	3/14/2024
CA144	Lake County Housing Commission	1/3/2024
FL017	Housing Authority of the City of Miami Beach	1/3/2024
FL032	Ocala Housing Authority	1/3/2024
FL049	North Central Florida Regional County	3/14/2024
FL068	Housing Authority of the City of Homestead	1/9/2024
IA045	Davenport Housing Commission	1/3/2024
IL082	Housing Authority of the County of Jodaviess	3/14/2024
IN004	Delaware County Housing Authority	1/9/2024
IN005	Housing Authority of the City of Muncie	2/22/2024
IN006	Housing Authority of the City of Anderson	2/9/2024
IN009	Housing Authority of the City of Richmond	2/9/2024
IN019	Housing Authority of the City of Michigan City	3/14/2024
IN020	Housing Authority of the City of Mishawaka	1/9/2024
IN025	Housing Authority of the City of Charlestown	2/9/2024
IN047	Housing Authority of the City of Crawfordsvil	1/3/2024
IN050	New Castle Housing Authority	1/31/2024
IN086	Housing Authority of the City of Union City	1/9/2024
KY026	Housing Authority of Glasgow	3/14/2024
KY157	Housing Authority of Floyd County	3/6/2024
KY161	Appalachian Foothills Housing Agency Inc	3/14/2024
MI880	Housing Services Mid-Michigan	2/22/2024

Code	PHAs	Waiver signed
MO065	Chillicothe Housing Authority	3/6/2024
MO212	Ripley County Public Housing Agency	1/31/2024
MO227	Housing Assistance Prog of St Charles County	1/31/2024
MT006	Richland County Housing Authority	3/6/2024
NE181	Goldenrod Regional Housing Agency	1/9/2024
NH009	Lebanon Housing Authority	3/6/2024
NY001	Syracuse Housing Authority	3/6/2024
NY009	Albany Housing Authority	3/6/2024
NY406	Village of Fairport	2/22/2024
OH001	Columbus Metropolitan Housing Authority	2/9/2024
OH029	Ashtabula Metropolitan Housing Authority	1/31/2024
PA038	Lackawanna County Housing Authority	1/31/2024
PA047	Wilkes Barre Housing Authority	1/31/2024
RQ013	Municipality of Trujillo Alto	2/9/2024
SC002	Housing Authority of the City of Columbia	1/31/2024
SC028	Housing Authority of Georgetown	3/6/2024
TN006	Kingsport Housing and Redevelopment Authority	1/9/2024
TN026	Etowah Housing Authority	2/22/2024
TN054	Cleveland Housing Authority	1/3/2024
TN062	Dayton Housing Authority	1/31/2024
TX512	Deep East Texas Council of Governments	1/31/2024
WI048	New London Housing Authority	1/9/2024
WI206	Door County Housing Authority	1/31/2024
WV005	Housing Authority of the City of Parkersburg	2/9/2024

• *Regulation:* 24 CFR 982.503(b)(1)(iii) Exception Payment Standards up to 120% for PHAs that are currently approved for exception payment standard SAFMRs.

Project/Activity: Notice PIH 2023–29 Extension of Certain Regulatory Waivers for the Housing Choice Voucher (including Mainstream) Program and Streamlined Review Process.

Nature of Requirement: PHAs may request an extension of expedited waiver(s) to allow for establishment of payment standards up to 120 percent of its applicable FY2024 SAFMRs.

Reason Waived: The PHAs were authorized to adopt a payment standard above the basic

range, up to 120 percent of their approved Small Area FMR exception payment standards. These waivers were approved consistent with the streamlined regulatory waiver process in Notice PIH 2023–29, which allowed PHAs to request regulatory waivers that would assist PHAs in responding to ongoing fluctuations and disruptions in the rental market by providing more flexibility with establishing and applying payment standards. These waivers were provided to the PHAs because allowing for an exception payment standard up to 120 percent of the Small Area FMR exception payment standards helped ensure that families living in rental markets with ongoing fluctuations

and disruptions were not adversely impacted by rapidly increasing rents and were able to find rental units with their voucher.

Granted by: Dominique Blom, General Deputy Assistant for Public and Indian Housing.

Contact: Tesia Anyanaso, Office of Field Operations/Coordination and Compliance Division, Office of Public and Indian Housing 451 Seventh Street SW, Suite 3180, Washington, DC 20410, telephone (202) 402–7026 or email to PIH_Expedited_Waivers@hud.gov.

Code	PHAs	Waiver signed
CA033	County of Monterey Housing Authority	1/31/2024
FL021	Pahokee Housing Authority	2/9/2024
IN086	Housing Authority of the City of Union City	1/9/2024
IN901	Indiana Housing and Community Development	1/3/2024
KY040	Housing Authority of Mayfield	1/31/2024
MO227	Housing Assistance Prog of St Charles County	1/31/2024
TN006	Kingsport Housing and Redevelopment	1/9/2024
UT016	Housing Authority of Carbon County	1/9/2024

[FR Doc. 2024–23213 Filed 10–7–24; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–6418–N–05]

Announcement of Funding Awards

AGENCY: Office of the Chief Financial Officer, HUD.

ACTION: Notice.

SUMMARY: In accordance with section 102(a)(4)(C) of the Department of Housing and Urban Development Reform Act of 1989, this announcement notifies the public of funding decisions made by the Department in competitions for funding under the Notices of Funding Opportunity (NOFOs) and Notices for the following programs: Fiscal Year (FY) 2023 NOFO Healthy Homes and Weatherization Cooperation Demonstration (HHWCD) Grant Program, FY23 Lead and Healthy Homes Technical Studies (LHHTS) Grant Program, and FY23 NOFO

Housing Counseling Training Grant Program.

FOR FURTHER INFORMATION CONTACT: Christine Brown, Acting Director, Office of the Chief Financial Officer (Systems), Grants Management and Oversight at AskGMO@hud.gov; telephone (202) 402–2440 or the contact person listed in each appendix. HUD welcomes and is prepared to receive calls from individuals who are deaf or hard of hearing, as well as individuals with speech and communication disabilities. To learn more about how to make an

accessible telephone call, please visit <https://www.fcc.gov/consumers/guides/telecommunications-relay-service-trs>.

SUPPLEMENTARY INFORMATION: HUD posted the FY23 NOFO Healthy Homes and Weatherization Cooperation Demonstration (HHWCD) Grant Program on *grants.gov* September 15, 2023 (FR–6700–N–62). The competition closed on November 6, 2023. HUD rated and selected applications for funding based on selection criteria contained in the NOFO. This competition awarded \$1,000,000 to 1 recipient to fund a Healthy Homes and Weatherization Cooperation Demonstration grant that provides housing interventions in lower-income households that are served by both HUD's Healthy Homes Production (HHP) program and the Department of Energy's (DOE's) Weatherization Assistance Program (WAP) to determine whether coordination between the programs concerning the implementation of healthy homes remediation activities and energy conservation measures achieves cost-effectiveness and better outcomes in improving the safety and quality of homes.

HUD posted the FY23 Lead and Healthy Homes Technical Studies (LHHTS) Grant Program on *grants.gov* September 15, 2023 (FR–6700–N–15). The competition closed on November 6, 2023. HUD rated and selected applications for funding based on selection criteria contained in the NOFO. This competition awarded \$13,393,381 to 15 recipients to fund studies to improve knowledge of housing-related health and safety hazards and to improve or develop new hazard assessment and control methods, with a focus on lead and other key residential health and safety hazards. In addition, the funded studies will advance the knowledge of priority healthy homes issues by addressing important gaps in science related to the accurate and efficient identification of hazards and the implementation of cost-effective hazard mitigation.

HUD posted the FY23 NOFO Housing Counseling Training Grant Program on *grants.gov* October 31, 2023 (FR–6700–N–30). The competition closed on November 30, 2023. HUD rated and selected applications for funding based on selection criteria contained in the NOFO. This competition awarded

\$2,750,000 to 7 recipients to provide professional development and educational offerings to equip new and existing HUD-certified housing counselors with the necessary tools to meet the evolving needs of homeowners, homebuyers, and renters. Training funds can also be used to prepare students for housing counseling careers and to attract a new pipeline of professionals to the housing counseling industry.

In accordance with section 102(a)(4)(C) of the Department of Housing and Urban Development Reform Act of 1989 (103 Stat. 1987, 42 U.S.C. 3545(a)(4)(C)), the Department is publishing the awardees and the amounts of the awards in Appendices A–C of this document.

Christine Brown,

Acting Director, Grants Management and Oversight, Office of the Chief Financial Officer.

Appendix A

Healthy Homes and Weatherization Cooperation Demonstration (HHWCD) Grant Program (FR–6700–N–62)

Contact: Emma Kaiser, 678–732–2214.

Legal name	Address	City	State	ZIP+4	Amount
East Central Intergovernmental Association	7600 Commerce Park	Dubuque	IA	52002–9673	\$1,000,000.00

Appendix B

Lead and Healthy Homes Technical Studies (LHHTS) Grant Program (FR–6700–N–15)

Contact: Larry Byrd, (202) 402–8078.

LEAD TECHNICAL STUDIES (LTS) PROGRAM

Organization	Address	City	State	ZIP+4	Amount
Emory University	1599 Clifton Road NE, 4th Floor	Atlanta	GA	30322–4250	\$800,000.00
The Trustees of Columbia University in the City of New York	615 West 131st Street	New York	NY	10027–7922	799,837.00
LTS Total					1,599,837.00

HEALTHY HOMES TECHNICAL STUDIES (HHTS) PROGRAM

Organization	Address	City	State	ZIP+4	Amount
Louisiana State University	202 Himes Hall	Baton Rouge	LA	70803–0001	\$984,594.00
Berkeley Air Monitoring Group, Inc	1935 Addison Street, Suite A	Berkeley	CA	94704–1354	987,868.00
Illinois Institute of Technology	10 West 35th Street	Chicago	IL	60616–3717	370,261.00
The Board of Trustees of the University of Illinois	809 S Marshfield Avenue	Chicago	IL	60612–7227	998,734.00
Johns Hopkins University	733 North Broadway, Suite 117	Baltimore	MD	21205–1832	999,990.00
The Ohio State University	1960 Kenny Road	Columbus	OH	43210–1016	999,999.00
North Carolina State University	2601 Wolf Village Way—Admin Services III, Suite 240	Raleigh	NC	27695–7514	999,917.00
Trustees Of Indiana University	509 E 3rd St	Bloomington	IN	47401–3654	994,743.00
The Curators of the University of Missouri	5100 Rockhill Road	Kansas City	MO	64110–2499	999,823.00
University of Pittsburgh	300 Murdoch I Building	Pittsburgh	PA	15260–3203	999,878.00
BanfieldBio Inc	17309 174th Ave. NE, P.O. Box 2622	Woodinville	WA	98072–9697	997,467.00
University of North Dakota	4201 James Ray Drive, Suite 2050	Grand Forks	ND	58202–8367	486,377.00
Rutgers University of New Jersey	33 Knightsbridge Road 2nd Floor, East Wing	Piscataway	NJ	08854–3925	973,893.00

HEALTHY HOMES TECHNICAL STUDIES (HHTS) PROGRAM—Continued

Organization	Address	City	State	ZIP+4	Amount
HHTS Total					11,793,544.00
LHHTS Total					13,393,381.00

Appendix C
FY23 NOFO Housing Counseling
Training Grant Program (FR-6700-N-30)

Contact: Joel Ibanez, 714-955-0812.

Grantee name	Address	City	State	Zip	Total award
National Association of Real Estate Brokers-Investment Division, Inc.	7677 OakPort Street, Suite 1030	Oakland	CA	94621	\$82,500.00
Rural Community Assistance Corporation	3120 Freeboard Drive, Suite 201	West Sacramento	CA	95691	396,246.39
National Community Reinvestment Coalition	740 15th St. NW, Suite 400	Washington	DC	20005	578,416.92
Neighborhood Reinvestment Corp., DBA Neighbor Works America.	255 Union St. NE, Suite 500	Washington	DC	20002	524,936.58
UnidosUS	1126 16th Street NW, Suite 600	Washington	DC	20036	420,930.75
Housing Action Illinois	67 E Madison Street, Suite 1603	Chicago	IL	60603	391,035.89
Neighborhood Stabilization Corporation	225 Centre Street, Suite 100	Boston	MA	02119	355,933.47
Total .....				.....	2,750,000.00

[FR Doc. 2024-23197 Filed 10-7-24; 8:45 am]
BILLING CODE 4210-67-P

DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT

[Docket No. FR-7086-N-26]

60-Day Notice of Proposed Information
Collection: Supplement to Application
for Federally Assisted Housing; OMB
Control No.: 2502-0581

AGENCY: Office of the Assistant
Secretary for Housing—Federal Housing
Commissioner, HUD.

ACTION: Notice.

SUMMARY: HUD is seeking approval from the Office of Management and Budget (OMB) for the information collection described below. In accordance with the Paperwork Reduction Act, HUD is requesting comment from all interested parties on the proposed collection of information. The purpose of this notice is to allow for 60 days of public comment.

DATES: Comments Due Date: December 9, 2024.

ADDRESSES: Interested persons are invited to submit comments regarding this proposal.

Written comments and recommendations for the proposed information collection can be sent within 60 days of publication of this notice to www.regulations.gov. Interested persons are also invited to submit comments regarding this proposal by name and/or OMB Control Number and can be sent to: Colette

Pollard, Reports Management Officer, REE, Department of Housing and Urban Development, 451 7th Street SW, Room 8210, Washington, DC 20410-5000; telephone (202) 402-3400. (this is not a toll-free number) or email at Colette.Pollard@hud.gov, for a copy of the proposed forms or other available information.

FOR FURTHER INFORMATION CONTACT: Colette Pollard, Reports Management Officer, REE, Department of Housing and Urban Development, 451 7th Street SW, Washington, DC 20410; email Colette.Pollard@hud.gov or telephone (202) 402-3400. This is not a toll-free number. HUD welcomes and is prepared to receive calls from individuals who are deaf or hard of hearing, as well as individuals with speech and communication disabilities. To learn more about how to make an accessible telephone call, please visit <https://www.fcc.gov/consumers/guides/telecommunications-relay-service-trs>.

Copies of available documents submitted to OMB may be obtained from Ms. Pollard.

SUPPLEMENTARY INFORMATION: This notice informs the public that HUD is seeking approval from OMB for the information collection described in Section A.

A. Overview of Information Collection

Title of Information Collection: Supplement to Application for Federally Assisted Housing.

OMB Approval Number: 2502-0581.
Type of Request: Reinstatement, with change, of previously approved

collection for which approval has expired.
Form Number: HUD Form 92006.
Description of the need for the information and proposed use: Section 644 of the Housing and Community Development Act of 1992 (42 U.S.C. 13604) imposed on HUD the obligation to require housing providers participating in HUD's assisted housing programs to provide any individual or family applying for occupancy in HUD-assisted housing with the option to include in the application for occupancy the name, address, telephone number, and other relevant information of a family member, friend, or person associated with a social, health, advocacy, or similar organization. The objective of providing such information, if this information is provided, and if the applicant becomes a tenant, is to facilitate contact by the housing provider with the person or organization identified by the tenant, to assist in providing any the delivery of services or special care to the tenant and assist with resolving any tenancy issues arising during the tenancy of such tenant. This supplemental application information is to be maintained by the housing provider and maintained as confidential information.
Respondents: The respondents are individuals or families who are new admissions in the covered programs.
Estimated Number of Respondents: 302,770.
Estimated Number of Responses: 302,770.
Frequency of Response: Each individual or family only responds once

unless they wish to update their information.

Average Hours per Response: 0.25 hours.

Total Estimated Burden: 75,693.

B. Solicitation of Public Comment

This notice is soliciting comments from members of the public and affected parties concerning the collection of information described in Section A on the following:

(1) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) The accuracy of the agency's estimate of the burden of the proposed collection of information;

(3) Ways to enhance the quality, utility, and clarity of the information to be collected; and

(4) Ways to minimize the burden of the collection of information on those who are to respond; including through the use of appropriate automated collection techniques or other forms of information technology, *e.g.*, permitting electronic submission of responses.

HUD encourages interested parties to submit comment in response to these questions.

C. Authority

Section 3507 of the Paperwork Reduction Act of 1995, 44 U.S.C. chapter 35.

Jeffrey D. Little,

General Deputy Assistant Secretary, Office of Housing.

[FR Doc. 2024–23199 Filed 10–7–24; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF THE INTERIOR

Geological Survey

[GX24GG009950000]

Public Meeting of the Scientific Earthquake Studies Advisory Committee (SESAC)

AGENCY: U.S. Geological Survey, Department of the Interior.

ACTION: Notice of public meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act (FACA) of 1972, the U.S. Geological Survey (USGS) is publishing this notice to announce that a Federal Advisory Committee meeting of the SESAC will take place.

DATES: The meeting will be a hybrid meeting held both in person and virtually via Microsoft Teams from 9:00

a.m. to 5:30 p.m. (PDT) on November 14, 2024, and from 8:00 a.m. to 1 p.m. (PDT) on November 15, 2024.

ADDRESSES: The meeting will be held in person at the USGS facility on the Caltech campus, located at 525 S Wilson Ave. in Pasadena, California, and virtually via Microsoft Teams.

FOR FURTHER INFORMATION CONTACT: Dr. Gavin Hayes, USGS, by email at ghayes@usgs.gov or by telephone at 303–374–4449. Individuals in the United States who are deaf, blind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION: This meeting is being held under the provisions of the FACA of 1972 (5 U.S.C. ch. 10), the Government in the Sunshine Act of 1976 (5 U.S.C. 552B, as amended), and 41 CFR 102–3.140 and 102–3.150.

Purpose of the Meeting: The SESAC will review current activities of the USGS Earthquake Hazards Program (EHP), discuss future priorities, and consider its draft report to the USGS Director.

Agenda Topics: EHP strategic planning; administration priorities and interactions; budget opportunities; balance of activities supported by the EHP; external grants; National Earthquake Hazards Reduction Program (NEHRP); National Seismic Hazard Model; ShakeAlert and Earthquake Early Warning; reports from SESAC subcommittees; and the draft report to the USGS Director.

Meeting Accessibility/Special Accommodations: The meeting is open to the public. Members of the public wishing to attend the meeting should contact Dr. Gavin Hayes (see **FOR FURTHER INFORMATION CONTACT**). Virtual meeting instructions will be provided to registered attendees prior to the meeting.

Please make requests in advance for sign-language interpreter services, assistive listening devices, language translation services, or other reasonable accommodations. We ask that you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section of this notice at least seven (7) business days prior to the meeting to give the Department of the Interior sufficient time to process your request. All reasonable accommodation requests are managed on a case-by-case basis.

Public Disclosure of Comments: There will be an opportunity for public comments during both days of the meeting. Depending on the number of people who wish to speak and the time available, the time for individual comments may be limited. Written comments may also be sent to the SESAC for consideration. To allow for full consideration of information by the SESAC members, written comments must be provided to Dr. Gavin Hayes (see **FOR FURTHER INFORMATION CONTACT**) at least three (3) business days prior to the meeting. Any written comments received will be provided to SESAC members before the meeting.

Before including your address, phone number, email address, or other personally identifiable information (PII) in your comment, you should be aware that your entire comment—including your PII—may be made publicly available at any time. While you may ask us in your comment to withhold your PII from public review, we cannot guarantee that we will be able to do so.

Authority: 5 U.S.C. ch. 10.

Gary Latzke,

Chief of Staff, Natural Hazards Mission Area.

[FR Doc. 2024–23258 Filed 10–7–24; 8:45 am]

BILLING CODE 4338–11–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–WASO–NRNHL–DTS#–38857; PPWOCRADIO, PCU00RP14.R50000]

National Register of Historic Places; Notification of Pending Nominations and Related Actions

AGENCY: National Park Service, Interior.

ACTION: Notice.

SUMMARY: The National Park Service is soliciting electronic comments on the significance of properties nominated before September 28, 2024, for listing or related actions in the National Register of Historic Places.

DATES: Comments should be submitted electronically by October 23, 2024.

ADDRESSES: Comments are encouraged to be submitted electronically to National_Register_Submissions@nps.gov with the subject line “Public Comment on <property or proposed district name, (County) State>.” If you have no access to email, you may send them via U.S. Postal Service and all other carriers to the National Register of Historic Places, National Park Service, 1849 C Street NW, MS 7228, Washington, DC 20240.

FOR FURTHER INFORMATION CONTACT:

Sherry A. Frear, Chief, National Register of Historic Places/National Historic Landmarks Program, 1849 C Street NW, MS 7228, Washington, DC 20240, sherry_frear@nps.gov, 202–913–3763.

SUPPLEMENTARY INFORMATION: The properties listed in this notice are being considered for listing or related actions in the National Register of Historic Places. Nominations for their consideration were received by the National Park Service before September 28, 2024. Pursuant to Section 60.13 of 36 CFR part 60, comments are being accepted concerning the significance of the nominated properties under the National Register criteria for evaluation.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Nominations submitted by State or Tribal Historic Preservation Officers

Key: State, County, Property Name, Multiple Name(if applicable), Address/Boundary, City, Vicinity, Reference Number.

Connecticut**Fairfield County**

Dr. Harvey and Rhoda Wasserman House, (Mid-Twentieth-Century Modern Residences in Connecticut 1930–1979, MPS), 23 Huckleberry Lane, Weston, MP100010945

Morris and Rose Greenwald House, (Mid-Twentieth-Century Modern Residences in Connecticut 1930–1979, MPS), 11 Homeward Lane, Weston, MP100010953

Massachusetts**Essex County**

Haverhill Powder House, 91 Powder House Avenue, Haverhill, SG100010944

Suffolk County

Dixwell Street Apartments Historic District, 12–14, 18–20 Dixwell Street; 1989–1991 Columbus Avenue, 7–9 Dixwell Street, 11–13 Dixwell Street, 17 Dixwell Street, 21–23 Dixwell Street, Boston, SG100010939
Hyde Park High School, 15 Everett Street, Boston, SG100010943

Worcester County

North Village Cemetery, Otis Street, Lancaster, SG100010942

Nebraska**Adams County**

Hastings Masonic Temple, 411 North Hastings Avenue, Hastings, SG100010947

Buffalo County

Shelton Public Library, (Carnegie Libraries in Nebraska MPS), 313 C St., Shelton, MP100010940

Douglas County

First National Center, 1620 Dodge Street, Omaha, SG100010948

Nevada**Clark County**

LULAC Multi-Purpose Senior Center, 330 N 13th Street, Las Vegas, SG100010949

Washoe County

Black Springs Volunteer Firehouse, (Fire Stations of Nevada MPS), West termination of Coretta Way at Kennedy Drive, Reno, MP100010950

Texas**Harris County**

River Oaks Theatre, 2050 West Gray Street, Houston, SG100010951

Additional documentation has been received for the following resource(s):

North Carolina**Alamance County**

Downtown Burlington Historic District (Additional Documentation), Roughly bounded by Morehead, S. Main, Davis, S. Worth, E. Webb and Spring Sts., Burlington, AD90001320

Authority: Section 60.13 of 36 CFR part 60.

Sherry A. Frear,

*Chief, National Register of Historic Places/
National Historic Landmarks Program.*

[FR Doc. 2024–23215 Filed 10–7–24; 8:45 am]

BILLING CODE 4312–52–P

DEPARTMENT OF THE INTERIOR**Bureau of Reclamation**

[RR040U2000, XXXR4081G3,
RX.05940913.FY19400]

Public Meeting of the Glen Canyon Dam Adaptive Management Work Group

AGENCY: Bureau of Reclamation, Interior.

ACTION: Notice of public meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act of 1972, the Bureau of Reclamation (Reclamation) is publishing this notice to announce that a Federal Advisory Committee meeting of the Glen Canyon Dam Adaptive Management Work Group (AMWG) will take place. The meeting is open to the public.

DATES: The meeting will be held in-person and virtually on Wednesday, February 26, 2025, from 9:30 a.m. to

approximately 5:00 p.m. (MST); and Thursday, February 27, 2025, from 8:30 a.m. to approximately 3:30 p.m. (MST).

ADDRESSES: The in-person meeting will be held in the Ballroom at the Hilton Garden Inn, Phoenix Tempe University Research Park, 7290 S. Price Road, Tempe, AZ 85283.

The virtual meeting held on Wednesday, February 26, 2025, may be accessed at <https://rec.webex.com/rec/j.php?MTID=m55fb1100a0d0240cd08e03da4d4ed7aa>; Meeting Number: 2827 999 4264, Password: AMP26.

The virtual meeting held on Thursday, February 27, 2025, may be accessed at <https://rec.webex.com/rec/j.php?MTID=mde33cbc0ac58b0f3103dd892f6c0026c>; Meeting Number: 2824 367 2897, Password: AMP27.

FOR FURTHER INFORMATION CONTACT: Mr. William Stewart, Bureau of Reclamation, telephone (385) 622–2179, email at wstewart@usbr.gov. Individuals who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION: The Glen Canyon Dam Adaptive Management Program (GCDAMP) was implemented as a result of the Record of Decision on the Operation of Glen Canyon Dam Final Environmental Impact Statement to comply with consultation requirements of the Grand Canyon Protection Act (Pub. L. 102–575) of 1992. The AMWG makes recommendations to the Secretary of the Interior concerning Glen Canyon Dam operations and other management actions to protect resources downstream of Glen Canyon Dam, consistent with the Grand Canyon Protection Act. The AMWG meets two to three times a year.

Agenda: The AMWG will meet to receive updates on: (1) current basin hydrology and water year 2025 operations; (2) experiments considered for implementation in 2025; (3) the status of threatened and endangered species; (4) long-term funding considerations. The AMWG will also discuss other administrative and resource issues pertaining to the GCDAMP. To view a copy of the agenda and documents related to the above meeting, please visit Reclamation's website at <https://www.usbr.gov/uc/progact/amp/amwg.html>.

Meeting Accessibility/Special Accommodations: The meeting is open to the public. Please make requests in

advance for sign language interpreter services, assistive listening devices, language translation services, or other reasonable accommodations. We ask that you contact Mr. William Stewart (see **FOR FURTHER INFORMATION CONTACT** section of this notice) at least seven (7) business days prior to the meeting to give the Department of the Interior sufficient time to process your request. All reasonable accommodation requests are managed on a case-by-case basis.

Public Disclosure of Comments: Time will be allowed on both days for any individual or organization wishing to make extemporaneous and/or formal oral comments. Depending on the number of persons wishing to speak, and the time available, the time for individual comments may be limited. Interested parties should contact Mr. William Stewart (see **FOR FURTHER INFORMATION CONTACT**) for placement on the public speaker list for this meeting. Members of the public may also choose to submit written comments by emailing them to wstewart@usbr.gov. Due to time constraints during the meeting, the AMWG is not able to read written public comments. All written comments will be made part of the public record and will be provided to the AMWG members.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Authority: 5 U.S.C. ch. 10.

William Stewart,

Adaptive Management Group Chief, Upper Colorado Basin—Interior Region 7.

[FR Doc. 2024–23219 Filed 10–7–24; 8:45 am]

BILLING CODE 4332–90–P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 337–TA–1232 (Enforcement)]

Certain Chocolate Milk Powder and Packaging Thereof; Notice of a Commission Determination To Review an Initial Determination Granting a Motion for Summary Determination of Violation of the General Exclusion Order; Request for Briefing on the Issues Under Review and on Remedy, Public Interest, and Bonding

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission (“Commission”) has determined to review an initial determination (“ID”) (Order No. 9) of the presiding administrative law judge (“ALJ”) granting a motion for summary determination of violation of the General Exclusion Order (“GEO”). The Commission has determined to review the ID’s findings that there have been violations of the GEO. The Commission requests written submissions from the parties on the issues under review and from the parties, interested government agencies, and other interested persons on the issues of remedy, the public interest, and bonding as to the asserted trademark, under the schedule set forth below.

FOR FURTHER INFORMATION CONTACT: Paul Lall, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 205–2043. Copies of non-confidential documents filed in connection with this investigation may be viewed on the Commission’s electronic docket (EDIS) at <https://edis.usitc.gov>. For help accessing EDIS, please email EDIS3Help@usitc.gov. General information concerning the Commission may also be obtained by accessing its internet server at <https://www.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission’s TDD terminal on (202) 205–1810.

SUPPLEMENTARY INFORMATION: The Commission instituted the original investigation on December 1, 2020, based on a complaint filed on behalf of Meenaxi Enterprise Inc. (“Meenaxi”) of Edison, New Jersey. 85 FR 77237–38 (Dec. 1, 2020). The complaint alleged violations of section 337 of the Tariff Act of 1930, 19 U.S.C. 1337, based upon the importation into the United States,

the sale for importation, and the sale within the United States after importation of certain chocolate milk powder and packaging thereof by reason of infringement of U.S. Trademark Registration No. 4,206,026 (“the ‘026 mark”). The Commission’s notice of investigation named several respondents, including but not limited to Bharat Bazar Inc. of Union City, California (“Bharat Bazaar”); Coconut Hill Inc. d/b/a Coconut Hill of Sunnyvale, California (“Coconut Hill”); Organic Food d/b/a Namaste Plaza Indian Super Market (“Organic Food”) of Fremont, California; and New India Bazar Inc. d/b/a New India Bazar of San Jose, California (“New India”). *Id.* at 77237. The Office of Unfair Import Investigations (“OUII”) was also a party to the investigation. *Id.*

In the underlying investigation, all respondents were found in default. *See* Order No. 6 (Feb. 10, 2021), *unreviewed by* Comm’n Notice (Mar. 2, 2021); Order No. 23 (May 19, 2022), *unreviewed by* Comm’n Notice (Jun. 14, 2022). On May 24, 2021, Meenaxi moved for summary determination of violation of section 337 by the respondents found in default by Order No. 6 and requested a GEO. On December 1, 2021, the former chief administrative law judge (“former CALJ”) granted the motion as an initial determination (“ID”) (Order No. 15), but noted discrepancies with respect to respondent Organic Food, calling into question whether that respondent was ever properly served with the complaint and notice of investigation and with the CALJ’s order to show cause why the respondents should not be found in default, Order No. 5 (Jan. 13, 2021). *See* Order No. 15 at 1, n.1. No petitions for review of the ID were filed. The Commission determined *sua sponte* to review Order No. 15 and ordered reconsideration of Order No. 6 as to Organic Food and/or any other respondents who may not have been properly served with documents in the underlying investigation. *See* Comm’n Notice at 3 (Jan. 18, 2022). The Commission remanded the investigation to an ALJ for further proceedings. *Id.*

On remand, the current chief administrative law judge (“CALJ”) issued Order No. 18, granting Meenaxi’s unopposed motion for leave to amend the complaint and notice of investigation to (i) substitute Organic Food with proposed respondent Organic Ingredients Inc. d/b/a Namaste Plaza Indian Super Market (“Organic Ingredients”) of San Diego, California; (ii) correct the address of respondent New India; (iii) correct the address of respondent Bharat Bazar; and (iv) supplement the complaint with Exhibits

9-a, 9-b, and 9-c, concerning Organic Food and/or Organic Ingredients. Order No. 18 at 1–5 (Mar. 11, 2022), *unreviewed by* Comm’n Notice (Apr. 12, 2022); *see also* 87 FR 22940–41 (Apr. 18, 2022). Meenaxi also demonstrated that Bharat Bazar actually had been served with all of the documents in the investigation (prior to remand) despite incorrectly spelling Bharat Bazar’s address as being on “Niled Road” instead of “Niles Road.” *See* Order No. 18 at 4.

The CALJ conducted remand proceedings as to Organic Ingredients and New India to respond to the amended complaint and notice of investigation, and then ordered them to respond to an order to show cause why they should not be found in default. *See* Order No. 19 (Mar. 11, 2022); Order No. 21 at 2–3 (May 3, 2022). On May 19, 2022, the CALJ issued an ID finding Organic Ingredients and New India in default. Order No. 23 (May 19, 2022), *unreviewed by* Comm’n Notice (June 14, 2022). Accordingly, the Commission found all respondents in default (collectively with the respondents previously found in default, the “Defaulting Respondents”).

Subsequently, on June 15, 2022, following the remand determination of default, Meenaxi again moved for summary determination of violation by the Defaulting Respondents and requested a GEO. On July 6, 2022, OUII filed a response supporting the motion.

On August 3, 2022, the CALJ issued a remand ID (“RID”) (Order No. 27), granting the second motion for summary determination and finding a violation of section 337 with respect to the ‘026 mark. The RID found that all Defaulting Respondents met the importation requirement and that Meenaxi satisfied the domestic industry requirement. *See* 19 U.S.C. 1337(a)(1–3). No party petitioned for review of the ID.

On September 19, 2022, the Commission determined not to review the RID. *See* 87 FR 58130–32 (Sept. 23, 2022). On November 15, 2022, the Commission issued a final determination finding a violation, issuing a GEO prohibiting the unlicensed importation of chocolate milk powder and packaging thereof that infringe the ‘026 mark, and terminating the investigation. *See* 87 FR 70864–66 (Nov. 21, 2022). The GEO prohibits the unlicensed importation of “chocolate milk powder in consumer-sized container with the Bournvita label.” *Id.* On the same day, the Commission issued an opinion explaining the basis for its final determination.

On November 9, 2023, the Commission determined to institute an

enforcement proceeding under Commission Rule 210.75 to investigate alleged violations of the GEO by four respondents: (1) Organic Ingredients; (2) New India; (3) Bharat Bazar; and (4) Coconut Hill (collectively the “Enforcement Respondents”). *See* Comm’n Notice, EDIS Doc. ID 808258 (Nov. 9, 2023); *see also* 88 FR 78786–87 (Nov. 16, 2023); 89 FR 15220 (Mar. 1, 2024). OUII is also named as a party. *Id.*

On January 10, 2024, the presiding ALJ issued an order directing the Enforcement Respondents to show cause why they should not be found in default and why judgment should not be rendered against them for failing to respond to the enforcement complaint and notice of investigation. *See* Order No. 6 (Jan. 10, 2024). Order No. 6 directed the Enforcement Respondents to make any showing of good cause by no later than February 2, 2024. *Id.* at 3. No party responded to Order No. 6. *See* Order No. 8 at 1 (Feb. 13, 2024).

On March 14, 2024, the Commission determined that the four Enforcement Respondents were in default. *See* Order No. 8 (Feb. 13, 2024), *unreviewed by* Comm’n Notice (Mar. 14, 2024). On March 15, 2024, Meenaxi filed a motion requesting summary determination of violation of the GEO and the issuance of CDOs against the four Enforcement Respondents. *See* ID at 5.

On August 16, 2024, the presiding ALJ issued the subject ID (Order No. 9), granting Meenaxi’s motion and recommending issuance of the requested CDOs. The ALJ concluded that “the un rebutted evidence summarized below demonstrates that the Enforcement Respondents have imported and/or sold after importation chocolate milk powder products bearing the ‘Bournvita’ label” in violation of the GEO. ID at 16. The ID noted that Meenaxi alleges that the Enforcement Respondents have violated the GEO by offering for sale, selling, advertising, and aiding and abetting the sale for Cadbury’s “BOURNVITA” products. *Id.* at 17–18. The ID explained that “[t]hese (or similar) products were found to infringe the ‘026 Mark during the violation phase” of this investigation. *Id.* at 18. No party filed a petition seeking review of the ID.

On August 19, 2024, the Commission issued a notice soliciting submissions on public interest issues raised by the recommended relief should the Commission find a violation of the GEO, specifically, CDOs against the four Enforcement Respondents: (1) Bharat Bazaar; (2) Coconut Hill; (3) Organic Ingredients; and (4) New India. 89 FR 68203–04 (Aug. 23, 2024). No comments were received in response to the notice.

Having reviewed the record of the investigation, including the enforcement complaint, the ID, and the parties’ submissions to the ALJ, the Commission has determined to review the ID’s findings that the Enforcement Respondents have violated the GEO. In connection with these findings, the Commission requests responses from the parties to the following questions:

(1) Whether the sale of infringing products imported before the issuance of a GEO but sold in the United States after the issuance of that order constitutes a violation of the GEO?

(2) Whether a complainant must provide evidence of importation of infringing products after the date on which the GEO issued in order to establish a violation of a GEO in an enforcement proceeding under Commission Rule 210.75 (19 CFR 210.75), and whether such evidence was presented here?

(3) Whether 19 U.S.C. 1337(g)(1) applies to allegations of a violation of a GEO in an enforcement proceeding involving defaulting Enforcement Respondents?

Written Submissions: The parties are requested to file written submissions on the questions identified in this notice.

In connection with the final disposition of this enforcement proceeding, the statute authorizes issuance of, *inter alia*, cease and desist orders in addition to the outstanding GEO, which could result in the respondents being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered.

The statute requires the Commission to consider the effects of that remedy upon the public interest. The public interest factors the Commission will consider include the effect that cease and desist orders would have on: (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

If the Commission orders some form of remedy, the U.S. Trade Representative, as delegated by the President, has 60 days to approve, disapprove, or take no action on the Commission’s determination. *See* Presidential Memorandum of July 21,

2005, 70 FR 43251 (July 26, 2005). During this period, the Enforcement Respondents would be entitled to continue the activities in the CDOs under bond, except to the extent they are prohibited by the outstanding GEO, in an amount determined by the Commission. The Commission is therefore interested in receiving submissions concerning the amount of the bond that should be imposed if a remedy is ordered.

Parties to the investigation, interested government agencies, and any other interested parties are encouraged to file written submissions on the issues of remedy, the public interest, and bonding. Such submissions should address the recommended determination by the ALJ on remedy and bonding.

In its initial submission, Complainant is also requested to identify the remedy sought and Complainant and OUI are requested to submit proposed remedial orders for the Commission's consideration. The initial written submissions and proposed remedial orders must be filed no later than close of business on October 16, 2024. Reply submissions must be filed no later than the close of business on October 23, 2024. No further submissions on these issues will be permitted unless otherwise ordered by the Commission. Opening submissions are limited to 25 pages. Reply submissions are limited to 15 pages. No further submissions on any of these issues will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 CFR 210.4(f) are currently waived. 85 FR 15798 (Mar. 19, 2020). Submissions should refer to the investigation number ("Inv. No. 337-TA-1232 Enforcement") in a prominent place on the cover page and/or the first page. (See Handbook for Electronic Filing Procedures, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary, (202) 205-2000.

Any person desiring to submit a document to the Commission in confidence must request confidential treatment by marking each document with a header indicating that the document contains confidential information. This marking will be deemed to satisfy the request procedure set forth in Rules 201.6(b) and 210.5(e)(2) (19 CFR 201.6(b) & 210.5(e)(2)). Documents for which confidential treatment by the Commission is properly sought will be

treated accordingly. Any non-party wishing to submit comments containing confidential information must serve those comments on the parties to the investigation pursuant to the applicable Administrative Protective Order. A redacted non-confidential version of the document must also be filed with the Commission and served on any parties to the investigation within two business days of any confidential filing. All information, including confidential business information and documents for which confidential treatment is properly sought, submitted to the Commission for purposes of this investigation may be disclosed to and used: (i) by the Commission, its employees and Offices, and contract personnel (a) for developing or maintaining the records of this or a related proceeding, or (b) in internal investigations, audits, reviews, and evaluations relating to the programs, personnel, and operations of the Commission including under 5 U.S.C. Appendix 3; or (ii) by U.S. government employees and contract personnel, solely for cybersecurity purposes. All contract personnel will sign appropriate nondisclosure agreements. All nonconfidential written submissions will be available for public inspection on EDIS.

The Commission's vote on this determination took place on October 2, 2024.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in part 210 of the Commission's Rules of Practice and Procedure (19 CFR part 210).

By order of the Commission.

Issued: October 2, 2024.

Lisa Barton,

Secretary to the Commission.

[FR Doc. 2024-23208 Filed 10-7-24; 8:45 am]

BILLING CODE 7020-02-P

JOINT BOARD FOR THE ENROLLMENT OF ACTUARIES

Renewal of Charter of Advisory Committee on Actuarial Examinations

AGENCY: Joint Board for the Enrollment of Actuaries.

ACTION: Notice of renewal of advisory committee.

SUMMARY: The Joint Board for the Enrollment of Actuaries announces the renewal of the charter of the Advisory Committee on Actuarial Examinations.

FOR FURTHER INFORMATION CONTACT: Elizabeth Van Osten, at

Elizabeth.j.vanosten@irs.gov or 202-317-3648.

SUPPLEMENTARY INFORMATION: The purpose of the Advisory Committee on Actuarial Examinations (Advisory Committee) is to advise the Joint Board for the Enrollment of Actuaries (Joint Board) on examinations in actuarial mathematics and methodology. The Joint Board administers such examinations in discharging its statutory mandate to enroll individuals who wish to perform actuarial services with respect to pension plans subject to the Employee Retirement Income Security Act of 1974. The Advisory Committee's functions include, but are not necessarily limited to, considering and recommending examination topics; developing examination questions; recommending proposed examinations; reviewing examination results and recommending pass marks; and as requested by the Joint Board, making recommendations relative to the examination program.

(Authority: 5 U.S.C. 1001 *et seq.*)

Dated: October 2, 2024.

Joleah M. White,

Chair, Joint Board for the Enrollment of Actuaries.

[FR Doc. 2024-23165 Filed 10-7-24; 8:45 am]

BILLING CODE 4830-01-P

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

Merry Alice Troupe, N.P.; Decision and Order

On February 14, 2024, the Drug Enforcement Administration (DEA or Government) issued an Order to Show Cause (OSC) to Merry Alice Troupe, N.P., of Tucson, Arizona (Registrant). Request for Final Agency Action (RFAA), Exhibit (RFAAX) 1, at 1, 3. The OSC proposed the revocation of Registrant's DEA Certificate of Registration No. MT3167384, alleging that Registrant's registration should be revoked because Registrant is "currently without authority to handle controlled substances in Arizona, the state in which [she is] registered with DEA." *Id.* at 2 (citing 21 U.S.C. 824(a)(3)).

The OSC notified Registrant of her right to file with DEA a written request for hearing, and that if she failed to file such a request, she would be deemed to have waived her right to a hearing and be in default. *Id.* at 2 (citing 21 CFR 1301.43). Here, Registrant did not

request a hearing. RFAA, at 2.¹ “A default, unless excused, shall be deemed to constitute a waiver of the registrant’s . . . right to a hearing and an admission of the factual allegations of the [OSC].” 21 CFR 1301.43(e).

Further, “[i]n the event that a registrant . . . is deemed to be in default . . . DEA may then file a request for final agency action with the Administrator, along with a record to support its request. In such circumstances, the Administrator may enter a default final order pursuant to [21 CFR] § 1316.67.” *Id.* § 1301.43(f)(1). Here, the Government has requested final agency action based on Registrant’s default pursuant to 21 CFR 1301.43(c), (d), 1301.46. RFAA, at 1; *see also* 21 CFR 1316.67.

Findings of Fact

The Agency finds that, in light of Registrant’s default, the factual allegations in the OSC are admitted. According to the OSC, on June 29, 2023, Registrant voluntarily surrendered her Arizona registered nurse license and her Arizona certified nurse practitioner license. RFAAX 1, at 2. According to Arizona online records, of which the Agency takes official notice, Registrant’s Arizona registered nurse license and Arizona certified nurse practitioner license are both listed as voluntarily surrendered and inactive.² <https://www.nursys.com/LQC/LQCViewReport.aspx> (last visited date of signature of this Order). Accordingly, the Agency finds that Registrant is not licensed to practice as a nurse practitioner or registered nurse in Arizona, the state in which she is registered with DEA.

Discussion

Pursuant to 21 U.S.C. 824(a)(3), the Attorney General is authorized to

suspend or revoke a registration issued under 21 U.S.C. 823 “upon a finding that the registrant . . . has had his State license or registration suspended . . . [or] revoked . . . by competent State authority and is no longer authorized by State law to engage in the . . . dispensing of controlled substances.” With respect to a practitioner, DEA has also long held that the possession of authority to dispense controlled substances under the laws of the state in which a practitioner engages in professional practice is a fundamental condition for obtaining and maintaining a practitioner’s registration. *See, e.g., James L. Hooper, M.D.*, 76 FR 71371, 71372 (2011), *pet. for rev. denied*, 481 F. App’x 826 (4th Cir. 2012); *Frederick Marsh Blanton, M.D.*, 43 FR 27616, 27617 (1978).³

According to Arizona statute, “[e]very person who manufactures, distributes, dispenses, prescribes or uses for scientific purposes any controlled substance within th[e] state or who proposes to engage in the manufacture, distribution, prescribing or dispensing of or using for scientific purposes any controlled substance within th[e] state must first: (1) [o]btain and possess a current license or permit as a medical practitioner as defined in § 32–1901 . . .” *Ariz. Rev. Stat. Ann.* section 36–2522(A) (2024). Section 32–1901 defines a “[m]edical practitioner” as “any medical doctor . . . or other person who is licensed and authorized by law to use and prescribe drugs and devices to treat sick and injured human beings or animals or to diagnose or prevent sickness in human beings or animals in [Arizona] or any state, territory or district of the United States.” *Id.* section 32–1901.

Here, the undisputed evidence in the record is that Registrant lacks authority to practice as a nurse practitioner or registered nurse in Arizona. As discussed above, only a licensed medical practitioner can dispense controlled substances in Arizona. Thus, because Registrant lacks authority to practice as a nurse practitioner or registered nurse in Arizona and, therefore, is not currently authorized to handle controlled substances in Arizona, Registrant is not eligible to maintain a DEA registration. Accordingly, the Agency will order that Registrant’s DEA registration be revoked.

Order

Pursuant to 28 CFR 0.100(b) and the authority vested in me by 21 U.S.C. 824(a), I hereby revoke DEA Certificate of Registration No. MT3167384 issued to Merry Alice Troupe, N.P. Further, pursuant to 28 CFR 0.100(b) and the authority vested in me by 21 U.S.C. 823(g)(1), I hereby deny any pending applications of Merry Alice Troupe, N.P., to renew or modify this registration, as well as any other pending application of Merry Alice Troupe, N.P., for additional registration in Arizona. This Order is effective November 7, 2024.

Signing Authority

This document of the Drug Enforcement Administration was signed on October 1, 2024, by Administrator Anne Milgram. That document with the original signature and date is maintained by DEA. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DEA Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of DEA. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Heather Achbach,

Federal Register Liaison Officer, Drug Enforcement Administration.

[FR Doc. 2024–23170 Filed 10–7–24; 8:45 am]

BILLING CODE 4410–09–P

¹ Based on the Government’s submissions in its RFAA dated May 6, 2024, the Agency finds that service of the OSC on Registrant was adequate. Specifically, the submitted Declaration from a DEA Diversion Investigator indicates that Registrant was personally served with the OSC on February 14, 2024. RFAAX 2, at 1–2.

² Under the Administrative Procedure Act, an agency “may take official notice of facts at any stage in a proceeding—even in the final decision.” *United States Department of Justice, Attorney General’s Manual on the Administrative Procedure Act* 80 (1947) (Wm. W. Gaunt & Sons, Inc., Reprint 1979). Pursuant to 5 U.S.C. 556(e), “[w]hen an agency decision rests on official notice of a material fact not appearing in the evidence in the record, a party is entitled, on timely request, to an opportunity to show the contrary.” Accordingly, Registrant may dispute the Agency’s finding by filing a properly supported motion for reconsideration of findings of fact within fifteen calendar days of the date of this Order. Any such motion and response shall be filed and served by email to the other party and to Office of the Administrator, Drug Enforcement Administration, at dea.addo.attorneys@dea.gov.

³ This rule derives from the text of two provisions of the Controlled Substances Act (CSA). First, Congress defined the term “practitioner” to mean “a physician . . . or other person licensed, registered, or otherwise permitted, by . . . the jurisdiction in which he practices . . . to distribute, dispense, . . . [or] administer . . . a controlled substance in the course of professional practice.” 21 U.S.C. 802(21). Second, in setting the requirements for obtaining a practitioner’s registration, Congress directed that “[t]he Attorney General shall register practitioners . . . if the applicant is authorized to dispense . . . controlled substances under the laws of the State in which he practices.” 21 U.S.C. 823(g)(1). Because Congress has clearly mandated that a practitioner possess state authority in order to be deemed a practitioner under the CSA, DEA has held repeatedly that revocation of a practitioner’s registration is the appropriate sanction whenever he is no longer authorized to dispense controlled substances under the laws of the state in which he practices. *See, e.g., James L. Hooper*, 76 FR 71371–72; *Sheran Arden Yeates, D.O.*, 71 FR 39130, 39131 (2006); *Dominick A. Ricci, D.O.*, 58 FR 51104, 51105 (1993); *Bobby Watts, D.O.*, 53 FR 11919, 11920 (1988); *Frederick Marsh Blanton*, 43 FR 27617.

DEPARTMENT OF JUSTICE

[1140–0019]

Agency Information Collection Activities; Proposed eCollection eComments Requested; Revision of a Previously Approved Collection Federal Firearms License (FFL) RENEWAL Application—ATF Form 8 (5310.11) Part II

AGENCY: Bureau of Alcohol, Tobacco, Firearms and Explosives, Department of Justice.

ACTION: 60-day notice.

SUMMARY: The Department of Justice (DOJ), The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995.

DATES: Comments are encouraged and will be accepted for 60 days until December 9, 2024.

FOR FURTHER INFORMATION CONTACT: If you have additional comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, contact: Leslie Anderson, ATF–FFLC, either by mail at 244 Needy Rd, Martinsburg, WV 25405, by email at Leslie.anderson@atf.gov, or telephone at 304–616–4634.

SUPPLEMENTARY INFORMATION: Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the Bureau of Justice Statistics, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Evaluate whether and if so how the quality, utility, and clarity of the information to be collected can be enhanced; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Abstract: Section 923 of Chapter 44 of Title 18 requires persons wishing to be licensed to renew their license every three years. In order to renew their license, licensees must complete ATF Form 8 (5310.11) Part II to certify compliance with the provisions of the law for the FFL business. Information Collection (IC) OMB is being revised to include major material changes to the form, such as removal and addition of section items, grammatical changes (sentence rephrasing/statement modification) and instruction modification and clarification.

Overview of This Information Collection

1. *Type of Information Collection:* Revision of a previously approved collection.

2. *The Title of the Form/Collection:* Federal Firearms License (FFL) RENEWAL Application.

3. *The agency form number, if any, and the applicable component of the Department sponsoring the collection:* Form number: ATF Form 8 (5310.11) Part II.

Component: Bureau of Alcohol, Tobacco, Firearms and Explosives, U.S. Department of Justice.

4. *Affected public who will be asked or required to respond, as well as the obligation to respond:* Affected Public: Individuals or households, Private Sector-for or not for profit institutions. The obligation to respond is mandatory per Title 18 U.S.C., Chapter 44.

5. *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* An estimated 33,500 respondents will respond to this collection once annually, and it will take each respondent approximately 30 minutes to complete their responses.

6. *An estimate of the total annual burden (in hours) associated with the collection:* The estimated annual public burden associated with this collection is 16,750 total hours, which is equal to 33,500 (total respondents) * 1 (# of response per respondent) * 0.5 (30 minutes).

7. *An estimate of the total annual cost burden associated with the collection, if applicable:* No new cost is associated with this collection. However, the annual cost has increased due to a change in the postal rate from \$0.63 during the last renewal in 2023, to \$0.73 in 2024. Consequently, the new public cost burden will be reported as \$24,455.00, which is equal to .73 (mailing cost per respondent) * 33,500 (# of respondents).

TOTAL BURDEN HOURS

Activity	Number of respondents	Frequency	Total annual responses	Time per response	Total annual burden (hours)
ATF Form 8 (5310.11) Part II ..	33,500 per Year	1 time per every 3 years	33,500	30 min	16,750
Unduplicated Totals	33,500 per Year	1 time per every 3 years	33,500	30 min	16,750

If additional information is required contact: Darwin Arceo, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and

Planning Staff, Two Constitution Square, 145 N Street NE, 4W–218, Washington, DC.

Dated: October 2, 2024.

Darwin Arceo,
Department Clearance Officer for PRA, U.S.
Department of Justice.

[FR Doc. 2024–23160 Filed 10–7–24; 8:45 am]

BILLING CODE 4410–FY–P

DEPARTMENT OF JUSTICE

[OMB 1140–0036]

Agency Information Collection Activities; Proposed eCollection eComments Requested; Revision of a Previously Approved Collection; FFL Out of Business Records Request—ATF Form 5300.3A

AGENCY: Bureau of Alcohol, Tobacco, Firearms and Explosives, Department of Justice.

ACTION: 60-Day notice.

SUMMARY: The Department of Justice (DOJ), The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995.

DATES: Comments are encouraged and will be accepted for 60 days until December 9, 2024.

FOR FURTHER INFORMATION CONTACT: If you have additional comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, contact: Matthew S. Grim, NTCD/TORM, either by mail at 244 Needy Rd., Martinsburg, WV 25405 by email at matthew.grimm@atf.gov, or telephone at 304–260–3683.

SUPPLEMENTARY INFORMATION: Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should

address one or more of the following four points:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the Bureau of Justice Statistics, including whether the information will have practical utility;
- Evaluate the accuracy of the agency’s estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Evaluate whether and if so how the quality, utility, and clarity of the information to be collected can be enhanced; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Abstract: The form is used by ATF to notify licensees who go out of business and fail to submit their records in the prescribed time frame. The questions are simple and a return physical or email address is provided. The format is easy for the user to list the required information ATF needs to perform its function regarding laws and regulations. Upon receipt of this form, licensees are to submit their records to the ATF Out-of-Business Records or transfer them to an active FFL successor. Information collection (IC) OMB #1140–0036 is being revised to reflect minor changes in narrative text to articulate more clearly what out of-business records are required to be submitted, where they are

to be submitted, and how they are to be submitted to the ATF OOBRC by OOB FFLs.

Overview of This Information Collection

1. *Type of Information Collection:* Revision of a previously approved collection.
2. *The Title of the Form/Collection:* FFL Out of Business Records Request.
3. *The agency form number, if any, and the applicable component of the Department sponsoring the collection:* Form number: ATF Form 5300.3A. *Component:* Bureau of Alcohol, Tobacco, Firearms and Explosives, U.S. Department of Justice.
4. *Affected public who will be asked or required to respond, as well as the obligation to respond:* Affected Public: Private Sector-for or not for profit institutions. The obligation to respond is mandatory per, 18 U.S.C. 923(g)(4), as implemented by 27 CFR 478.127.
5. *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* An estimated 3,030 respondents will respond to this collection, and it will take each respondent approximately 10 hours to complete their responses.
6. *An estimate of the total annual burden (in hours) associated with the collection:* The estimated annual public burden associated with this collection is 30,300, which is equal to 3,030 (total respondents) * 1 (# of response per respondent) * 10.00 (10 hours).
7. *An estimate of the total annual cost burden associated with the collection, if applicable:* \$0.

TOTAL BURDEN HOURS

Activity	Number of respondents	Frequency	Total annual responses	Time per response	Total annual burden (hours)
ATF Form 5300.3A	3,030	1	3,030	10 hours	30,300
Unduplicated Totals	3,030	1	3,030	10 hours	30,300

If additional information is required contact: Darwin Arceo, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution Square, 145 N Street NE, 4W–218, Washington, DC.

Dated: October 2, 2024.
Darwin Arceo,
Department Clearance Officer for PRA, U.S. Department of Justice.
[FR Doc. 2024–23158 Filed 10–7–24; 8:45 am]
BILLING CODE 4410–FY–P

DEPARTMENT OF LABOR

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Coverage of Certain Preventive Services Under the Affordable Care Act-Private Sector

ACTION: Notice of availability; request for comments.

SUMMARY: The Department of Labor (DOL) is submitting this Employee

Benefits Security Administration (EBSA)-sponsored information collection request (ICR) to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995 (PRA). Public comments on the ICR are invited.

DATES: The OMB will consider all written comments that the agency receives on or before November 7, 2024.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function.

FOR FURTHER INFORMATION CONTACT: Michael Howell by telephone at 202-693-6782, or by email at DOL_PRA_PUBLIC@dol.gov.

SUPPLEMENTARY INFORMATION: The Patient Protection and Affordable Care Act, Public Law 111-148, (the Affordable Care Act) was enacted on March 23, 2010 and amended by the Health Care and Education Reconciliation Act of 2010, Public Law 111-152 on March 30, 2010. The Affordable Care Act added section 2713 to the Public Health Service (PHS) Act and incorporated this provision into ERISA and the Code. The Departments of Health and Human Services, Labor, and Treasury first published interim final rules on July 19, 2010, which implements the requirements of PHS Act section 2713, including the requirement that non-grandfathered group health insurance coverage to provide benefits for certain preventive services without cost sharing, including benefits for certain women's preventive health services as provided for in comprehensive guidelines supported by the Health Resources and Services Administration. The Departments subsequently published regulations establishing an exemption for certain religious objectors with respect to the requirement to cover contraception pursuant to comprehensive guidelines supported by HRSA.

In 2013, the Department issued final rules, which clarified the definition of religious employer for purposes of the religious employer exemption and also provided accommodations for health coverage established or maintained or arranged by certain nonprofit religious organizations with religious objections to contraceptive services (eligible organizations). The 2018 final rules expanded the exemption to include

additional entities (any kind of employer) and persons that object based on religious beliefs or moral convictions objecting to contraceptive or sterilization coverage, and by making the accommodation compliance process optional for eligible organizations instead of mandatory. The regulations contain the following collections of information. First, each organization seeking to be treated as an eligible organization for the optional accommodation process offered under the regulation must either notify an issuer or third-party administrator using the EBSA Form 700 method of self-certification or provide notice to HHS of its religious or moral objection to coverage of all or a subset of contraceptive services. Second, a health insurance issuer or third-party administrator providing or arranging separate payments for contraceptive services for participants and beneficiaries in insured plans (or student enrollees and covered dependents in student health insurance coverage) of eligible organizations is required to provide a written notice to plan participants and beneficiaries (or student enrollees and covered dependents) informing them of the availability of such payments. The notice must be separate from but, contemporaneous with (to the extent possible) any application materials distributed in connection with enrollment (or re-enrollment) in group or student coverage of the eligible organization in any plan year to which the accommodation is to apply and will be provided annually. To satisfy the notice requirement, issuers may, but are not required to, use the model language set forth in the 2018 final rules or substantially similar language. Third, an eligible organization may also revoke its use of the accommodation process and must provide participants and beneficiaries written notice of such revocation as soon as possible. For additional substantive information about this ICR, see the related notice published in the **Federal Register** on February 5, 2024 (89 FR 7732).

Comments are invited on: (1) whether the collection of information is necessary for the proper performance of the functions of the Department, including whether the information will have practical utility; (2) the accuracy of the agency's estimates of the burden and cost of the collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility and clarity of the information collection; and (4) ways to minimize the burden of the

collection of information on those who are to respond, including the use of automated collection techniques or other forms of information technology.

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless the OMB approves it and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information that does not display a valid OMB Control Number. See 5 CFR 1320.5(a) and 1320.6.

DOL seeks PRA authorization for this information collection for three (3) years. OMB authorization for an ICR cannot be for more than three (3) years without renewal. The DOL notes that information collection requirements submitted to the OMB for existing ICRs receive a month-to-month extension while they undergo review.

Agency: DOL-EBSA.

Title of Collection: Coverage of Certain Preventive Services under the Affordable Care Act-Private Sector.

OMB Control Number: 1210-0150.

Affected Public: Private sector, Business or other for profits.

Total Estimated Number of Respondents: 60.

Total Estimated Number of Responses: 595,312.

Total Estimated Annual Time Burden: 72 hours.

Total Estimated Annual Other Costs Burden: \$181,222.

(Authority: 44 U.S.C. 3507(a)(1)(D))

Michael Howell,

Senior Paperwork Reduction Act Analyst.

[FR Doc. 2024-23196 Filed 10-7-24; 8:45 am]

BILLING CODE 4510-29-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by River View Coal, LLC.

DATES: All comments on the petition must be received by MSHA's Office of

Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA–2024–0046 by any of the following methods:

1. *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA–2024–0046.

2. *Fax:* 202–693–9441.

3. *Email:* petitioncomments@dol.gov.

4. *Regular Mail or Hand Delivery:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202–5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202–693–9455 to make an appointment, in keeping with the Department of Labor's COVID–19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202–693–9440 (voice), Petitionsformodification@dol.gov (email), or 202–693–9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M–2024–024–C.

Petitioner: River View Coal, LLC, 835 State Route 1179, Waverly, KY 42462.

Mine: Henderson County Mine, MSHA ID No. 15–02709, located in Union County, Kentucky.

Regulation Affected: 30 CFR 75.507–1(a), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.507–1(a) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) taken into or used inby the last open crosscut or used in the return air outby the last open crosscut. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR–800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

(a) The 3M Versaflo TR–800 PAPR with motor/blower and battery qualifies as intrinsically safe.

(b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

(c) Both the CleanSpace EX and the 3M Versaflo TR–800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

(d) Neither the 3M Versaflo TR–800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

(e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

(f) River View Coal currently makes available to all miners NIOSH-approved high efficiency 100 series respirators to protect the miners against potential exposure to respirable coal mine dust, including crystalline silica, during normal mining conditions. River View Coal desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. PAPRs provide a constant flow of filtered air and serve that purpose.

(g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection*. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR–800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the "fit test" requirement

of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

(h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units available that can be taken into or used inby the last open crosscut or used in the return air outby the last open crosscut.

(i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

(a) All miners who will be involved with or affected by the use of the 3M Versaflo TR–800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR–800 or CleanSpace EX PAPR can be used inby the last open crosscut or in the return air outby the last open crosscut. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR–800 and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512–1 and the examination results recorded in the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR–800 and CleanSpace EX PAPRs to be used inby the last open crosscut or in the return air outby the last open crosscut shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The

examinations for the 3M Versaflo TR–800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the “power unit” assembly and the battery cannot be removed, reinserted or fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR–800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer’s recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR–800 or the CleanSpace EX PAPR in by the last open crosscut or in the return air outby the last open crosscut, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR–830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133, in the 3M Versaflo TR–800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR–800 PAPR are provided, all battery “change outs” shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR–830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR–830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR–830 Battery Pack shall be charged only by a manufacturer’s recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR–641N, which includes one 3M Charger Cradle

TR–640 and one 3M Power Supply TR–941N, or,

(ii) 3M 4-Station Battery Charger Kit TR–644N, which includes four 3M Charger Cradles TR–640 and one 3M 4-Station Battery Charger Base/Power Supply TR–944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer’s recommended battery chargers shall be used, such as the CleanSpace EX Battery Charger, Product Code PAF–0066.

(4) Neither the 3M TR–830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water, allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR–830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR–800 PAPR nor the CleanSpace EX PAPR, including the internal battery, shall be used, charged or stored in locations where the manufacturer’s recommended temperature limits are exceeded. Neither the 3M Versaflo TR–800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR–800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep a record of such training and provide such record to MSHA upon request.

(k) The miners at River View Coal, LLC, Henderson County Mine, are not represented by a labor organization and there are no representatives of miners at the mine. A copy of this petition has been posted on the bulletin board at River View Coal, LLC, Henderson County Mine, on August 30, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024–23242 Filed 10–7–24; 8:45 am]

BILLING CODE 4520–43–P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by Excel Mining.

DATES: All comments on the petition must be received by MSHA’s Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA–2024–0052 by any of the following methods:

1. *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA–2024–0052.

2. *Fax:* 202–693–9441.

3. *Email:* petitioncomments@dol.gov.

4. *Regular Mail or Hand Delivery:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202–5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist’s desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202–693–9455 to make an appointment, in keeping with the Department of Labor’s COVID–19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202–693–9440 (voice), Petitionsformodification@dol.gov (email), or 202–693–9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any

mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M–2024–029–C.

Petitioner: Excel Mining, 4126 State

Highway 194 W, Pikeville, KY 41501.

Mine: Excel #5 Mine, MSHA ID No. 15–19838, located in Pike County, Kentucky.

Regulation Affected: 30 CFR 75.507–1(a), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.507–1(a) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) taken into or used inby the last open crosscut or used in the return air outby the last open crosscut. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR–800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

(a) The 3M Versaflo TR–800 PAPR with motor/blower and battery qualifies as intrinsically safe.

(b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

(c) Both the CleanSpace EX and the 3M Versaflo TR–800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

(d) Neither the 3M Versaflo TR–800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

(e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

(f) Excel Mining currently makes available to all miners NIOSH-approved high efficiency 100 series respirators to protect the miners against potential exposure to respirable coal mine dust, including crystalline silica, during normal mining conditions. Excel Mining desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. PAPRs provide a constant flow of filtered air and serve that purpose.

(g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection*. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR–800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the “fit test” requirement of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

(h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units available that can be taken into or used inby the last open crosscut or used in return air outby the last open crosscut.

(i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

(a) All miners who will be involved with or affected by the use of the 3M Versaflo TR–800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR–800 or CleanSpace EX PAPR can be used inby the last open crosscut or in the return air outby the last open crosscut. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR–800 and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512–1 and the examination results recorded in

the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR–800 and CleanSpace EX PAPRs to be used inby the last open crosscut or in the return air outby the last open crosscut shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The examinations for the 3M Versaflo TR–800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the “power unit” assembly and the battery cannot be removed, reinserted or fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR–800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer's recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR–800 or the CleanSpace EX PAPR inby the last open crosscut or in the return air outby the last open crosscut, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR–830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133, in the 3M Versaflo TR–800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR–800 PAPR are provided, all battery “change outs” shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR-830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR-830 Battery Pack shall be charged only by a manufacturer's recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR-641N, which includes one 3M Charger Cradle TR-640 and one 3M Power Supply TR-941N, or,

(ii) 3M 4-Station Battery Charger Kit TR-644N, which includes four 3M Charger Cradles TR-640 and one 3M 4-Station Battery Charger Base/Power Supply TR-944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer's recommended battery chargers shall be used, such as the CleanSpace EX Battery Charger, Product Code PAF-0066.

(4) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water, allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR-830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR, including the internal battery, shall be used, charged or stored in locations where the manufacturer's recommended temperature limits are exceeded. Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep a record of such training and provide such record to MSHA upon request.

(k) The miners at Excel Mining, Excel #5 Mine, are not represented by a labor organization and there are no representatives of miners at the mine. A

copy of this petition has been posted on the bulletin board at Excel Mining, Excel #5 Mine, on September 12, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024-23237 Filed 10-7-24; 8:45 am]

BILLING CODE 4520-43-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by Excel Mining.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA-2024-053 by any of the following methods:

1. *Federal eRulemaking Portal:*

<https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA-2024-053.

2. *Fax:* 202-693-9441.

3. *Email:* petitioncomments@dol.gov.

4. *Regular Mail or Hand Delivery:*

MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202-693-9455 to make an appointment, in keeping with the Department of Labor's COVID-19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202-693-9440 (voice), [\[dol.gov\]\(mailto:dol.gov\) \(email\), or 202-693-9441 \(fax\). \[These are not toll-free numbers.\]](mailto:Petitionsformodification@</p></div><div data-bbox=)

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M-2024-030-C.

Petitioner: Excel Mining, 4126 State Highway 194 W, Pikeville, KY 41501.

Mine: Excel #5 Mine, MSHA ID No. 15-19838, located in Pike County, Kentucky.

Regulation Affected: 30 CFR 75.1002(a), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.1002(a) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) within 150 feet of pillar workings or longwall faces. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR-800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

(a) The 3M Versaflo TR-800 PAPR with motor/blower and battery qualifies as intrinsically safe.

(b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

(c) Both the CleanSpace EX and the 3M Versaflo TR-800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

(d) Neither the 3M Versaflo TR-800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

(e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

(f) Excel Mining currently makes available to all miners NIOSH-approved high efficiency 100 series respirators to protect the miners against potential exposure to respirable coal mine dust, including crystalline silica, during normal mining conditions. Excel Mining desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. PAPRs provide a constant flow of filtered air and serve that purpose.

(g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection*. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR-800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the "fit test" requirement of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

(h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units available that can be used within 150 feet of pillar workings or longwall faces.

(i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

(a) All miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR-800 or CleanSpace EX PAPR can be used within 150 feet of pillar workings or longwall faces. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic

safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR-800 and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512-1 and the examination results recorded in the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR-800 and CleanSpace EX PAPRs to be used within 150 feet of pillar workings or longwall faces shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The examinations for the 3M Versaflo TR-800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the "power unit" assembly and the battery cannot be removed, reinserted or fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR-800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer's recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR-800 or the CleanSpace EX PAPR within 150 feet of pillar workings or longwall faces, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR-830 Battery Pack, which meets lithium battery safety

standard UL 1642 or IEC 62133, in the 3M Versaflo TR-800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR-800 PAPR are provided, all battery "change outs" shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR-830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR-830 Battery Pack shall be charged only by a manufacturer's recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR-641N, which includes one 3M Charger Cradle TR-640 and one 3M Power Supply TR-941N, or,

(ii) 3M 4-Station Battery Charger Kit TR-644N, which includes four 3M Charger Cradles TR-640 and one 3M 4-Station Battery Charger Base/Power Supply TR-944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer's recommended battery chargers shall be used, such as the CleanSpace EX Battery Charger, Product Code PAF-0066.

(4) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water, allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR-830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR, including the internal battery, shall be used, charged or stored in locations where the manufacturer's recommended temperature limits are exceeded. Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and

training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep a record of such training and provide such record to MSHA upon request.

(k) The miners at Excel Mining, Excel #5 Mine, are not represented by a labor organization and there are no representatives of miners at the mine. A copy of this petition has been posted on the bulletin board at Excel Mining, Excel #5 Mine, on September 12, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024-23232 Filed 10-7-24; 8:45 am]

BILLING CODE 4520-43-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by River View Coal, LLC.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA-2024-0044 by any of the following methods:

1. *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA-2024-0044.

2. *Fax:* 202-693-9441.

3. *Email:* petitioncomments@dol.gov.

4. *Regular Mail or Hand Delivery:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person,

call 202-693-9455 to make an appointment, in keeping with the Department of Labor's COVID-19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202-693-9440 (voice), Petitionsformodification@dol.gov (email), or 202-693-9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M-2024-022-C.

Petitioner: River View Coal, LLC, 835 State Route 1179, Waverly, KY 42462.

Mine: River View Mine, MSHA ID No. 15-19374, located in Union County, Kentucky.

Regulation Affected: 30 CFR 75.507-1(a), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.507-1(a) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) taken into or used inby the last open crosscut or used in the return air outby the last open crosscut. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR-800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

- (a) The 3M Versaflo TR-800 PAPR with motor/blower and battery qualifies as intrinsically safe.

- (b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

- (c) Both the CleanSpace EX and the 3M Versaflo TR-800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

- (d) Neither the 3M Versaflo TR-800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

- (e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

- (f) River View Coal currently makes available to all miners NIOSH-approved high efficiency 100 series respirators to protect the miners against potential exposure to respirable coal mine dust, including crystalline silica, during normal mining conditions. River View Coal desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. Powered PAPRs provide a constant flow of filtered air and serve that purpose.

- (g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection*. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR-800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the "fit test" requirement of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

- (h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units available that can be taken into or used inby the last open crosscut or used in the return air outby the last open crosscut.

- (i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

- (a) All miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision

and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR-800 or CleanSpace EX PAPR can be used in by the last open crosscut or in the return air outby the last open crosscut. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR-800 and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512-1 and the examination results recorded in the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR-800 and CleanSpace EX PAPRs to be used in by the last open crosscut or in the return air outby the last open crosscut shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The examinations for the 3M Versaflo TR-800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the "power unit" assembly and the battery cannot be removed, reinserted or

fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR-800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer's recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR-800 or the CleanSpace EX PAPR in by the last open crosscut or in the return air outby the last open crosscut, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR-830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133, in the 3M Versaflo TR-800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR-800 PAPR are provided, all battery "change outs" shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR-830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR-830 Battery Pack shall be charged only by a manufacturer's recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR-641N, which includes one 3M Charger Cradle TR-640 and one 3M Power Supply TR-941N, or,

(ii) 3M 4-Station Battery Charger Kit TR-644N, which includes four 3M Charger Cradles TR-640 and one 3M 4-Station Battery Charger Base/Power Supply TR-944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer's recommended battery chargers shall be used, such as the CleanSpace EX Battery Charger, Product Code PAF-0066.

(4) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water, allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR-830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR,

including the internal battery, shall be used, charged or stored in locations where the manufacturer's recommended temperature limits are exceeded. Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep a record of such training and provide such record to MSHA upon request.

(k) The miners at River View Coal, LLC, River View Mine, are not represented by a labor organization and there are no representatives of miners at the mine. A copy of this petition has been posted on the bulletin board at River View Coal, LLC, River View Mine, on August 30, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024-23243 Filed 10-7-24; 8:45 am]

BILLING CODE 4520-43-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by River View Coal, LLC.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA-2024-0045 by any of the following methods:

1. *Federal eRulemaking Portal:*
<https://www.regulations.gov>. Follow the

instructions for submitting comments for MSHA–2024–0045.

2. *Fax:* 202–693–9441.

3. *Email:* petitioncomments@dol.gov.

4. *Regular Mail or Hand Delivery:*

MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202–5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202–693–9455 to make an appointment, in keeping with the Department of Labor's COVID–19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202–693–9440 (voice), Petitionsformodification@dol.gov (email), or 202–693–9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M–2024–023–C.

Petitioner: River View Coal, LLC, 835 State Route 1179, Waverly, KY 42462.

Mine: Henderson County Mine, MSHA ID No. 15–02709, located in Union County, Kentucky.

Regulation Affected: 30 CFR 75.500(d), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.500(d) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) taken into or used inby the last open crosscut. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR–800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

(a) The 3M Versaflo TR–800 PAPR with motor/blower and battery qualifies as intrinsically safe.

(b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

(c) Both the CleanSpace EX and the 3M Versaflo TR–800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

(d) Neither the 3M Versaflo TR–800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

(e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

(f) River View Coal currently makes available to all miners NIOSH-approved high efficiency 100 series respirators to protect the miners against potential exposure to respirable coal mine dust, including crystalline silica, during normal mining conditions. River View Coal desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. PAPRs provide a constant flow of filtered air and serve that purpose.

(g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection*. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR–800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the “fit test” requirement of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

(h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units

available that can be taken into or used inby the last open crosscut.

(i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

(a) All miners who will be involved with or affected by the use of the 3M Versaflo TR–800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR–800 or CleanSpace EX PAPR can be used inby the last open crosscut. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR–800 and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512–1 and the examination results recorded in the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR–800 and CleanSpace EX PAPRs to be used inby the last open crosscut shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The examinations for the 3M Versaflo TR–800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the "power unit" assembly and the battery cannot be removed, reinserted or fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR-800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer's recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR-800 or the CleanSpace EX PAPR in by the last open crosscut, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR-830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133, in the 3M Versaflo TR-800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR-800 PAPR are provided, all battery "change outs" shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR-830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR-830 Battery Pack shall be charged only by a manufacturer's recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR-641N, which includes one 3M Charger Cradle TR-640 and one 3M Power Supply TR-941N, or,

(ii) 3M 4-Station Battery Charger Kit TR-644N, which includes four 3M Charger Cradles TR-640 and one 3M 4-Station Battery Charger Base/Power Supply TR-944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer's recommended battery chargers shall be used, such as the

CleanSpace EX Battery Charger, Product Code PAF-0066.

(4) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water or be allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR-830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR, including the internal battery, shall be used, charged or stored in locations where the manufacturer's recommended temperature limits are exceeded. Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep a record of such training and provide such record to MSHA upon request.

(k) The miners at River View Coal, LLC, Henderson County Mine, are not represented by a labor organization and there are no representatives of miners at the mine. A copy of this petition has been posted on the bulletin board at River View Coal, LLC, Henderson County Mine, on August 30, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024-23240 Filed 10-7-24; 8:45 am]

BILLING CODE 4520-43-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health

Administration (MSHA) by Excel Mining.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA-2024-0051 by any of the following methods:

1. *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA-2024-0051.

2. *Fax:* 202-693-9441.

3. *Email:* petitioncomments@dol.gov.

4. *Regular Mail or Hand Delivery:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202-693-9455 to make an appointment, in keeping with the Department of Labor's COVID-19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202-693-9440 (voice), Petitionsformodification@dol.gov (email), or 202-693-9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and Title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M–2024–028–C.

Petitioner: Excel Mining, 4126 State Highway 194 W, Pikeville, KY 41501.

Mine: Excel #5 Mine, MSHA ID No. 15–19838, located in Pike County, Kentucky.

Regulation Affected: 30 CFR 75.500(d), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.500(d) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) taken into or used inby the last open crosscut. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR–800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

(a) The 3M Versaflo TR–800 PAPR with motor/blower and battery qualifies as intrinsically safe.

(b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

(c) Both the CleanSpace EX and the 3M Versaflo TR–800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

(d) Neither the 3M Versaflo TR–800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

(e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

(f) Excel Mining currently makes available to all miners NIOSH-approved high efficiency 100 series respirators to protect the miners against potential exposure to respirable coal mine dust, including crystalline silica, during normal mining conditions. Excel Mining desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. PAPRs provide a constant flow of filtered air and serve that purpose.

(g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection*. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR–800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already

in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the “fit test” requirement of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

(h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units available that can be taken into or used inby the last open crosscut.

(i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

(a) All miners who will be involved with or affected by the use of the 3M Versaflo TR–800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR–800 or CleanSpace EX PAPR can be used inby the last open crosscut. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR–800 and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512–1 and the examination results recorded in the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR–800 and CleanSpace EX PAPRs to be used inby the last open crosscut shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The examinations for the 3M Versaflo TR–800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the “power unit” assembly and the battery cannot be removed, reinserted or fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR–800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer's recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR–800 or the CleanSpace EX PAPR inby the last open crosscut, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR–830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133, in the 3M Versaflo TR–800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR–800 PAPR are provided, all battery “change outs” shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR–830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR–830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR–830 Battery Pack shall be charged only by a manufacturer's recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR–641N, which includes one 3M Charger Cradle TR–640 and one 3M Power Supply TR–941N, or,

(ii) 3M 4-Station Battery Charger Kit TR–644N, which includes four 3M

Charger Cradles TR-640 and one 3M 4-Station Battery Charger Base/Power Supply TR-944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer's recommended battery chargers shall be used, such as the CleanSpace EX Battery Charger, Product Code PAF-0066.

(4) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water, allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR-830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR, including the internal battery, shall be used, charged or stored in locations where the manufacturer's recommended temperature limits are exceeded. Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep a record of such training and provide such record to MSHA upon request.

(k) The miners at Excel Mining, Excel #5 Mine, are not represented by a labor organization and there are no representatives of miners at the mine. A copy of this petition has been posted on the bulletin board at Excel Mining, Excel #5 Mine, on September 12, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024-23231 Filed 10-7-24; 8:45 am]

BILLING CODE 4520-43-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by Mettiki Coal WV, LLC.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA-2024-0055 by any of the following methods:

1. *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA-2024-0055.
2. *Fax:* 202-693-9441.
3. *Email:* petitioncomments@dol.gov
4. *Regular Mail or Hand Delivery:*

MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202-693-9455 to make an appointment, in keeping with the Department of Labor's COVID-19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202-693-9440 (voice), Petitionsformodification@dol.gov (email), or 202-693-9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any

mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M-2024-032-C.

Petitioner: Mettiki Coal WV, LLC, 293 Table Rock Road, Oakland, MD 21550.

Mine: Mountain View Mine, MSHA ID No. 46-09028, located in Davis, WV.

Regulation Affected: 30 CFR 75.507-1(a), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.507-1(a) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) taken into or used inby the last open crosscut or used in the return air outby the last open crosscut. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR-800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

(a) The 3M Versaflo TR-800 PAPR with motor/blower and battery qualifies as intrinsically safe.

(b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

(c) Both the CleanSpace EX and the 3M Versaflo TR-800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

(d) Neither the 3M Versaflo TR-800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

(e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

(f) Mettiki Coal currently makes available to all miners NIOSH-approved high efficiency 100 series respirators to protect the miners against potential exposure to respirable coal mine dust, including crystalline silica, during normal mining conditions. Mettiki Coal desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. PAPRs provide a constant flow of filtered air and serve that purpose.

(g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to*

Respirable Crystalline Silica and Improving Respiratory Protection. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR-800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the "fit test" requirement of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

(h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units available that can be taken into or used inby the last open crosscut or used in return air outby the last open crosscut.

(i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

(a) All miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR-800 or CleanSpace EX PAPR can be used inby the last open crosscut or in the return air outby the last open crosscut. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR-800 and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512-1 and the examination results recorded in the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR-800 and CleanSpace EX PAPRs to be used inby the last open crosscut or in the return air outby the last open crosscut shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The examinations for the 3M Versaflo TR-800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the "power unit" assembly and the battery cannot be removed, reinserted or fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR-800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer's recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR-800 or the CleanSpace EX PAPR inby the last open crosscut or in the return air outby the last open crosscut, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR-830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133, in the 3M Versaflo TR-800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR-800 PAPR are provided, all battery "change outs" shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR-830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR-830 Battery Pack shall be charged only by a manufacturer's recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR-641N, which includes one 3M Charger Cradle TR-640 and one 3M Power Supply TR-941N, or,

(ii) 3M 4-Station Battery Charger Kit TR-644N, which includes four 3M Charger Cradles TR-640 and one 3M 4-Station Battery Charger Base/Power Supply TR-944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer's recommended battery chargers shall be used, such as the CleanSpace EX Battery Charger, Product Code PAF-0066.

(4) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water, allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR-830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR, including the internal battery, shall be used, charged or stored in locations where the manufacturer's recommended temperature limits are exceeded. Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep a record of such training and provide such record to MSHA upon request.

(k) The miners at Mettiki Coal WV, LLC, Mountain View Mine, are not represented by a labor organization and there are no representatives of miners at the mine. A copy of this petition has been posted on the bulletin board at

Mettiki Coal WV, LLC, Mountain View Mine, on September 13, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024–23247 Filed 10–7–24; 8:45 am]

BILLING CODE 4520–43–P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by Mettiki Coal WV, LLC.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA–2024–0056 by any of the following methods:

1. *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA–2024–0056.

2. *Fax:* 202–693–9441.

3. *Email:* petitioncomments@dol.gov.

4. *Regular Mail or Hand Delivery:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202–5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202–693–9455 to make an appointment, in keeping with the Department of Labor's COVID–19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202–693–9440 (voice), Petitionsformodification@dol.gov (email), or 202–693–9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M–2024–033–C.

Petitioner: Mettiki Coal WV, LLC, 293 Table Rock Road, Oakland, MD 21550.

Mine: Mountain View Mine, MSHA ID No. 46–09028, located in Davis, WV.

Regulation Affected: 30 CFR 75.1002(a), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.1002(a) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) within 150 feet of pillar workings or longwall faces. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR–800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

(a) The 3M Versaflo TR–800 PAPR with motor/blower and battery qualifies as intrinsically safe.

(b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

(c) Both the CleanSpace EX and the 3M Versaflo TR–800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

(d) Neither the 3M Versaflo TR–800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

(e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

(f) Mettiki Coal currently makes available to all miners NIOSH-approved

high efficiency 100 series respirators to protect the miners against potential exposure to respirable coal mine dust, including crystalline silica, during normal mining conditions. Mettiki Coal desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. PAPRs provide a constant flow of filtered air and serve that purpose.

(g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection*. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR–800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the "fit test" requirement of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

(h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units available that can be used within 150 feet of pillar workings or longwall faces.

(i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

(a) All miners who will be involved with or affected by the use of the 3M Versaflo TR–800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR–800 or CleanSpace EX PAPR can be used within 150 feet of pillar workings or longwall faces. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR–800

and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512-1 and the examination results recorded in the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR-800 and CleanSpace EX PAPRs to be used within 150 feet of pillar workings or longwall faces shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The examinations for the 3M Versaflo TR-800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the "power unit" assembly and the battery cannot be removed, reinserted or fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR-800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer's recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR-800 or the CleanSpace EX PAPR within 150 feet of pillar workings or longwall faces, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR-830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133, in the 3M Versaflo TR-800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety

standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR-800 PAPR are provided, all battery "change outs" shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR-830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR-830 Battery Pack shall be charged only by a manufacturer's recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR-641N, which includes one 3M Charger Cradle TR-640 and one 3M Power Supply TR-941N, or,

(ii) 3M 4-Station Battery Charger Kit TR-644N, which includes four 3M Charger Cradles TR-640 and one 3M 4-Station Battery Charger Base/Power Supply TR-944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer's recommended battery chargers shall be used, such as the CleanSpace EX Battery Charger, Product Code PAF-0066.

(4) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water, allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR-830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR, including the internal battery, shall be used, charged or stored in locations where the manufacturer's recommended temperature limits are exceeded. Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep

a record of such training and provide such record to MSHA upon request.

(k) The miners at Mettiki Coal WV, LLC, Mountain View Mine, are not represented by a labor organization and there are no representatives of miners at the mine. A copy of this petition has been posted on the bulletin board at Mettiki Coal WV, LLC, Mountain View Mine, on September 13, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024-23239 Filed 10-7-24; 8:45 am]

BILLING CODE 4520-43-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by Rockwell Mining LLC.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA-2024-0029 by any of the following methods:

1. *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA-2024-0029.
2. *Fax:* 202-693-9441.
3. *Email:* petitioncomments@dol.gov.
4. *Regular Mail or Hand Delivery:*

MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202-693-9455 to make an appointment, in keeping with the Department of Labor's COVID-19

policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202–693–9440 (voice), *Petitionsformodification@dol.gov* (email), or 202–693–9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M–2024–012–C.

Petitioner: Rockwell Mining, LLC, 4619 Bolt Road, Bolt, WV 25817.

Mine: Eagle #3 Mine, MSHA ID No. 46–09427, located in Wyoming County, West Virginia.

Regulation Affected: 30 CFR 75.1700, Oil and gas wells.

Modification Request: The petitioner requests a modification of 30 CFR 75.1700 as it relates to oil and gas wells at the mine. Specifically, the petitioner is petitioning to mine within the 300-foot barrier established by 30 CFR 75.1700.

The petitioner states that:

(a) Rockwell operates one continuous miner super section with two continuous miners. The mining is in the lower Eagle seam. There is no undermining at Eagle #3 mine. In the area of the gas wells, there is overmining in the No. 2 gas seam by Kopperston No. 2 mine. There is overmining in the Upper Eagle seam but not in the area of the wells.

(b) The planning and configuration of a set of the mains entries is between two abandoned mines. Such mains will

encounter three and perhaps more gas wells drilled through lower Eagle coal seam. One such well is active and two are abandoned. All such wells will need to be plugged so that they can be mined through.

(c) Rockwell expects to encounter such wells within 6 months.

(d) The petition addresses items for which District Manager approval is required: procedures for cleaning out and preparing oil and gas wells prior to plugging or re-plugging; procedures for plugging or re-plugging oil or gas wells to the surface; procedures for plugging or re-plugging oil or gas wells for use as degasification boreholes, alternative procedures for preparing and plugging or re-plugging oil or gas wells; and procedures after approval has been granted to mine through a plugged or re-plugged well.

(e) The type of oil or gas well that will be considered under this Petition includes: wells that have been depleted of oil or gas production or have not produced oil or gas and that may have been plugged; or active conventional vertical wells which are not producing gas or oil, subject to the provisions below. Unconventional wells in the Marcellus or Utica and all other unconventional shale oil and gas wells are not subject to this modification. Nothing in these provisions is meant to lessen, diminish, or substitute any provision found in applicable state laws or regulations.

(f) Although some gas wells were present in the northern reserve, the mine plan includes the use and maintenance of barriers in accordance with state and federal regulations. At that time, the mine reserve was large enough to allow for mining “around” the established barriers. Now that mining in the northern reserve has been exhausted, the additional mining will be completed in the southern portion of the reserve. The mine is actively developing a new center ridge corridor between an older abandoned mine (Ranger Fuel Corp. E- Mine) and the coal seam outcrop. Maintaining a 300-foot barrier in this area makes it impossible to gain access to the remaining reserves in the mine. The map titled “Eagle No. 3 Mine—MINE MAP” shows the current mining in this area with the projected mining in by the gas wells. The corridor development will cease at break 29 until a Proposed Decision and Order (PDO) is granted by MSHA. Until such time, the active producing section (MMU–001 and MMU–002) will relocate to a small reserve area outby the active faces. Rockwell Mining, LLC, is submitting a petition for modification to allow for the plugging of and mining through these

gas wells and to significantly reduce the barrier and mine around the wells, if possible. The alternative method of plugging the wells shall not compromise the protection to miners. The plugging of wells to this excepted standard ensures the safety of our miners and extends the life of the mine. Without the ability to extend the corridor to the south, the mine will cease operations sooner than anticipated, after it has exhausted the reserves outby break 29.

(g) The alternative method provides an equivalent level of protection as many previous petitions. It permits identification of wells and contains provisions that prevent the introduction of methane or natural gas within the mine by appropriate and extensive plugging of the wells. Additional precautions provide for the detection of gas and the prevention of accumulations of gas with oversight by MSHA.

The petitioner proposes the following alternative method:

(a) A safety barrier of 300 feet in diameter (150 feet between any mined area and a well) shall be maintained around all oil and gas wells (defined herein to include all active, inactive, abandoned, shut-in, previously plugged wells, water injection wells, and carbon dioxide sequestration wells) until approval to proceed with mining has been obtained from the District Manager.

(b) Prior to mining within the 300-foot safety barrier around any well that the mine plans to intersect, the mine operator shall provide to the District Manager a sworn affidavit or declaration executed by a company official stating that all mandatory procedures for cleaning out, preparing, and plugging each gas or oil well have been completed as described by the terms and conditions of the PDO granted by MSHA. The affidavit or declaration must be accompanied by all logs described in the PDO granted by MSHA and any other records that the District Manager may request. Once approved by the District Manager, the mine operator may mine within the safety barrier of the well, subject to the terms of the PDO granted by MSHA.

(c) If well intersection is not planned, the mine operator may request a permit to reduce the 300-foot diameter of the safety barrier that does not include intersection of the well. The District Manager may require documents and information that help verify the accuracy of the location of the well with respect to the mine maps and mining projections, including survey closure data, down-hole well deviation logs, historical well intersection location data. If the District Manager approves,

the mine operator may then mine within the safety barrier of the well.

(d) In the event an uncharted well is inadvertently mined into, mining shall cease immediately on the section, electrical power shall be deenergized in the affected area, and MSHA shall be notified immediately via the emergency phone number posted on MSHA's website for reporting of this hazardous condition. In addition to its potential for liberating methane, the well may also be an open connection from the mine to the surface that presents a hazard to the mine and the environment. The District will respond with a timely investigation, issue a K Order if needed, and allow resumption of mining once a suitable action plan is in place.

(e) The terms and conditions of the PDO granted by MSHA shall apply to all types of underground coal mining.

(f) The following procedures shall be followed for cleaning out and preparing vertical oil and gas wells prior to plugging or re-plugging:

(1) The mine operator shall test for gas emissions inside the hole before cleaning out, preparing, plugging, and re-plugging oil and gas wells. The District Manager shall be contacted if gas is being produced.

(2) A diligent effort shall be made to clean the well to the original total depth. The mine operator shall contact the District Manager prior to stopping the operation to pull casing or clean out the total depth of the well. If this depth cannot be reached, and the total depth of the well is less than 4,000 feet, the operator shall completely clean out the well from the surface to at least 200 feet below the base of the lowest mineable coal seam, unless the District Manager requires cleaning to a greater depth based on the geological strata or pressure within the well. The operator shall provide the District Manager with all information it possesses concerning the geological nature of the strata and the pressure of the well. If the total depth of the well is 4,000 feet, or greater, the operator shall completely clean out the well from the surface to at least 400 feet below the base of the lowest mineable coal seam. The operator shall remove all material from the entire diameter of the well, wall to wall. If the total depth of the well is unknown and there is no historical information, the mine operator must contact the District Manager before proceeding.

(3) The operator shall prepare down-hole logs for each well. Logs shall consist of a caliper survey, a gamma log, a bond log and a deviation survey for determining the top, bottom, and thickness of all coal seams down to the

lowest minable coal seam, potential hydrocarbon producing strata and the location of any existing bridge plug. In addition, a journal shall be maintained describing the depth of each material encountered; the nature of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated or ripped or left in place; any section where casing was cut or milled; and other pertinent information concerning cleaning and sealing the well. Invoices, workorders, and other records relating to all work on the well shall be maintained as part of the logs and provided to MSHA upon request.

(4) When cleaning out the well as detailed in subparagraph (f)(2), the operator shall make a diligent effort to remove all of the casing in the well. After the well is completely cleaned out and all the casing removed, the well should be plugged to the total depth by pumping expanding cement slurry and pressurizing to at least 200 pounds per square inch (psi). If the casing cannot be removed, it must be cut, milled, perforated or ripped at all mineable coal seam levels to facilitate the removal of any remaining casing in the coal seam by the mining equipment. Any casing which remains shall be perforated or ripped to permit the injection of cement into voids within and around the well. All casing remaining at mineable coal seam levels shall be perforated or ripped at least every 5 feet from 10 feet below the coal seam to 10 feet above the coal seam.

(5) Perforations or rips are required at least every 50 feet from 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam up to 100 feet above the uppermost mineable coal seam. The mine operator shall take appropriate steps to ensure that the annulus between the casing and the well walls are filled with expanding (minimum 0.5 percent expansion upon setting) cement and contain no voids.

(6) If it is not possible to remove all of the casing, the operator shall notify the District Manager before any other work is performed. If the well cannot be cleaned out or the casing removed, the operator shall prepare the well as described from the surface to at least 200 feet below the base of the lowest mineable coal seam for wells less than 4,000 feet in depth and 400 feet below the lowest mineable coal seam for wells 4,000 feet or greater, unless the District Manager requires cleaning out and removal of casing to a greater depth based on geological strata or the pressure within the well.

(7) If the operator, using a casing bond log, can demonstrate to the satisfaction of the District Manager that all annuli in the well are already adequately sealed with cement, the operator will not be required to perforate or rip the casing for that particular well. When multiple casing and tubing strings are present in the coal horizon(s), any remaining casing shall be ripped or perforated; then it shall be filled with expanding cement as indicated above. An acceptable casing bond log for each casing and tubing string is needed if used in lieu of ripping or perforating multiple strings.

(8) If the District Manager concludes that the completely cleaned out well is emitting excessive amounts of gas, the operator must place a mechanical bridge plug in the well. It must be placed in a competent stratum at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam, but above the top of the uppermost hydrocarbon-producing stratum, unless the District Manager requires a greater distance based on geological strata the pressure within the well. The operator shall provide the District Manager with all information it possesses concerning the geological nature of the strata and the pressure of the well. If it is not possible to set a mechanical bridge plug, an appropriately sized packer shall be used. The mine operator shall document what has been done to "kill the well" and plug the carbon producing strata.

(9) If the upper-most hydrocarbon-producing stratum is within 300 feet of the base of the lowest minable coal seam, the operator shall properly place mechanical bridge plugs as described in subparagraph (f)(8) to isolate the hydrocarbon-producing stratum from the expanding cement plug. The operator shall place a minimum of 200 feet (400 feet if the total well depth is 4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the District Manager requires a greater distance based on the geological strata or the pressure within the well.

(g) The following procedures shall be followed for plugging or re-plugging oil or gas wells to the surface after completely cleaning out the well as previously specified:

(1) The operator shall pump expanding cement slurry down the well to form a plug which runs from at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam (or lower if required by the District Manager based on the geological strata or the pressure within the well) to the

surface. The expanding cement shall be placed in the well under a pressure of at least 200 psi.

(2) Portland cement or a lightweight cement mixture shall be used to fill the area from 100 feet above the top of the uppermost mineable coal seam (or higher if required by the District Manager that a higher distance is required due to the geological strata or the pressure within the well) to the surface.

(3) The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger diameter casing, set in cement, shall extend at least 36 inches above the ground level with the American Petroleum Institute (API) well number engraved or welded on the casing. When the hole cannot be marked with a physical monument (*e.g.*, prime farmland), high-resolution GPS coordinates (one-half meter resolution) shall be required.

(h) The following procedures shall be followed for plugging or re-plugging oil and gas wells for use as degasification wells after completely cleaning out the well as previously specified:

(1) The operator shall set a cement plug in the well by pumping an expanding cement slurry down the tubing to provide at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the District Manager requires a greater depth based on the geological strata or the pressure within the well. The expanding cement shall be placed in the well under a pressure of at least 200 psi. The top of the expanding cement shall extend at least 50 feet above the top of the coal seam being mined, unless the District Manager requires a greater distance based on the geological strata or the pressure within the well.

(2) The operator shall securely grout into the bedrock of the upper portion of the degasification well a suitable casing to protect it. The remainder of this well may be cased or uncased.

(3) The operator shall fit the top of the degasification casing with a wellhead equipped as required by the District Manager in the approved ventilation plan. Such equipment may include check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.

(4) Operation of the degasification well shall be addressed in the approved ventilation plan. This may include periodic tests of methane levels and limits on the minimum methane concentrations that may be extracted.

(5) After the area of the coal mine that is degassed by a well is sealed or the coal mine is abandoned, the operator must plug all degasification wells using the following procedures:

(i) The operator shall insert a tube to the bottom of the well or, if not possible, to within 100 feet above the coal seam being mined. Any blockage must be removed to ensure that the tube can be inserted to this depth.

(ii) The operator shall set a cement plug in the well by pumping Portland cement or a lightweight cement mixture down the tubing until the well is filled to the surface.

(iii) The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger casing, set in cement, shall extend at least 36 inches above the ground level with the API well number engraved or welded on the casing.

(i) The following provisions apply to all wells which the operator determines, and with which the MSHA District Manager agrees, cannot be completely cleaned out due to damage to the well caused by subsidence, caving, or other factors.

(1) The operator shall drill a hole adjacent and parallel to the well, to a depth of at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the lowest mineable coal seam, unless the District Manager requires a greater depth based on the geological strata or the pressure within the well.

(2) The operator shall use a geophysical sensing device to locate any casing which may remain in the well.

(3) If the well contains casing(s), the operator shall drill into the well from the parallel hole. From 10 feet below the coal seam to 10 feet above the coal seam, the operator shall perforate or rip all casings at least every 5 feet. Beyond this distance, the operator shall perforate or rip at least every 50 feet from at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam up to 100 feet above the seam being mined, unless the District Manager requires a greater distance based on the geological strata or the pressure within the well. The operator shall fill the annulus between the casings and between the casings and the well wall with expanding (minimum 0.5 percent expansion upon setting) cement and shall ensure that these areas contain no voids. If the operator, using a casing bond log, can demonstrate to the satisfaction of the District Manager that the annulus of the well is adequately

sealed with cement, then the operator shall not be required to perforate or rip the casing for that particular well or fill these areas with cement. When multiple casing and tubing strings are present in the coal horizon(s), any casing which remains shall be ripped or perforated and filled with expanding cement as indicated. An acceptable casing bond log for each casing and tubing string shall be made if this used in lieu of ripping or perforating multiple strings.

(4) Where the operator determines, and the District Manager agrees, that there is insufficient casing in the well to allow the method outlined to be used, then the operator shall use a horizontal hydraulic fracturing technique to intercept the original well. From at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam to a point at least 50 feet above the seam being mined, the operator shall fracture in at least six places at intervals to be agreed upon by the operator and the District Manager after considering the geological strata and the pressure within the well. The operator shall pump expanding cement into the fractured well in sufficient quantities and in a manner which fills all intercepted voids.

(5) The operator shall prepare down-hole logs for each well. Logs shall consist of a caliper survey, a gamma log, a bond log and a deviation survey for determining the top, bottom, and thickness of all coal seams down to the lowest minable coal seam, potential hydrocarbon producing strata and the location of any existing bridge plug. The operator may obtain the logs from the adjacent hole rather than the well if the condition of the well makes it impractical to insert the equipment necessary to obtain the log.

(6) A journal shall be maintained that describes: the depth of each material encountered; the nature of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated or ripped or left in place; any sections where casing was cut or milled; and other pertinent information concerning sealing the well. Invoices, workorders, and other records relating to all work on the well shall be maintained as part of this journal and provided to MSHA upon request.

(7) After the operator has plugged the well, the operator shall plug the adjacent hole, from the bottom to the surface, with Portland cement or a lightweight cement mixture. The operator shall embed steel turnings or other small magnetic particles in the top

of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger casing, set in cement, shall extend at least 36 inches above the ground level. A combination of the methods outlined previously may have to be used in a single well, depending upon the conditions of the hole and the presence of casings. The operator and the District Manager shall discuss the nature of each hole and if the District Manager requires more than one method be utilized. The mine operator may submit an alternative plan to the District Manager for approval to use different methods including certification by a registered petroleum engineer to support the proposed alternative methods to address wells that cannot be completely cleaned out.

(j) The following procedures shall be followed when mining within a 100-foot diameter barrier around a well.

(1) A representative of the operator, a representative of the miners, the appropriate State agency, or the MSHA District Manager may request that a conference be conducted prior to intersecting any plugged or re-plugged well. The party requesting the conference shall notify all other parties listed above within a reasonable time prior to the conference to provide opportunity for participation. The purpose of the conference shall be to review, evaluate, and accommodate any abnormal or unusual circumstance related to the condition of the well or surrounding strata when such conditions are encountered.

(2) The operator shall intersect a well on a shift approved by the District Manager. The operator shall notify the District Manager and the miners' representative in sufficient time prior to intersecting a well to provide an opportunity to have representatives present.

(3) When using continuous mining methods, the operator shall install drilage sights at the last open crosscut near the place to be mined to ensure intersection of the well. The drilage sites shall not be more than 50 feet from the well. When using longwall mining methods, distance markers shall be installed on 5-foot centers for a distance of 50 feet in advance of the well in the headgate entry and in the tailgate entry.

(4) The operator shall ensure that fire-fighting equipment including fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the well intersection (when either the conventional or continuous mining method is used) is available and operable during all well intersections. The fire hose shall be located in the last

open crosscut of the entry or room. The operator shall maintain the water line to the belt conveyor tailpiece along with a sufficient amount of fire hose to reach the farthest point of penetration on the section. When the longwall mining method is used, a hose to the longwall water supply is sufficient.

(5) The operator shall ensure that sufficient supplies of roof support and ventilation materials shall be available and located at the last open crosscut. In addition, emergency plugs and suitable sealing materials shall be available in the immediate area of the well intersection.

(6) On the shift prior to intersecting the well, the operator shall service all equipment and check it for permissibility. Water sprays, water pressures, and water flow rates used for dust and spark suppression shall be examined and any deficiencies corrected.

(7) The operator shall calibrate the methane monitor(s) on the longwall, continuous mining machine, or cutting machine and loading machine on the shift prior to intersecting the well.

(8) When mining is in progress, the operator shall perform tests for methane with a handheld methane detector at least every 10 minutes from the time that mining with the continuous mining machine or longwall face is within 30 feet of the well until the well is intersected. During the actual cutting process, no individual shall be allowed on the return side until the well intersection has been completed and the area has been examined and declared safe. All workplace examinations on the return side of the shearer shall be conducted while the shearer is idle. The operator's most current approved ventilation plan shall be followed at all times unless the District Manager requires a greater air velocity for the intersect.

(9) When using continuous or conventional mining methods, the working place shall be free from accumulations of coal dust and coal spillages, and rock dust shall be placed on the roof, rib, and floor to within 20 feet of the face when intersecting the well. On longwall sections, rock dusting shall be conducted and placed on the roof, rib, and floor up to both the headgate and tailgate gob.

(10) When the well is intersected, the operator shall de-energize all equipment, and thoroughly examine and determine the area to be safe before permitting mining to resume.

(11) After a well has been intersected and the working place determined to be safe, mining shall continue in by the well a sufficient distance to permit

adequate ventilation around the area of the well.

(12) When necessary, torches shall be used for inadequately or inaccurately cut or milled casings. No open flame shall be permitted in the area until adequate ventilation has been established around the well bore and methane levels of less than 1.0 percent are present in all areas that will be exposed to flames and sparks from the torch. The operator shall apply a thick layer of rock dust to the roof, face, floor, ribs and any exposed coal within 20 feet of the casing prior to the use of torches.

(13) Non-sparking (brass) tools shall be located on the working section and shall be used exclusively to expose and examine cased wells.

(14) No person shall be permitted in the area of the well intersection except those engaged in the operation, company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.

(15) The operator shall alert all personnel in the mine to the planned intersection of the well prior to their going underground if the planned intersection is to occur during their shift. This warning shall be repeated for all shifts until the well has been mined through.

(16) The well intersection shall be under the direct supervision of a certified individual. Instructions concerning the well intersection shall be issued only by the certified individual in charge.

(17) If the mine operator cannot find the well in the middle of the panel or a gate section misses the anticipated intersection, mining shall cease and the District Manager shall be notified.

(18) A copy of the PDO granted by MSHA shall be maintained at the mine and be available to the miners.

(19) If the well is not plugged to the total depth of all minable coal seams identified in the core hole logs, any coal seams beneath the lowest plug shall remain subject to the barrier requirements of 30 CFR 75.1700.

(20) All necessary safety precautions and safe practices required by MSHA regulations and State regulatory agencies having jurisdiction over the plugging site shall be followed.

(21) All miners involved in the plugging or re-plugging operations shall be trained on the contents of the PDO granted by MSHA prior to starting the process.

(22) Mechanical bridge plugs should incorporate the best available technologies required or recognized by the State regulatory agency and/or oil and gas industry.

(23) Within 30 days after the PDO granted by MSHA becomes final, the operator shall submit proposed revisions for its approved 30 CFR part 48 training plan to the District Manager. These proposed revisions shall include initial and refresher training on compliance with the terms and conditions stated in the PDO granted by MSHA. The operator shall provide all miners involved in well intersection with training on the requirements of the PDO granted by MSHA prior to mining within 150 feet of a well intended to be mined through.

(24) The responsible person required under 30 CFR 75.1501 shall be responsible for well intersection emergencies. The well intersection procedures shall be reviewed by the responsible person prior to any planned intersection.

(25) Within 30 days after the PDO granted by MSHA becomes final, the operator shall submit proposed revisions for its approved mine emergency evacuation and firefighting program of instruction required under 30 CFR 75.1502. The operator shall revise the program of instruction to include the hazards and evacuation procedures to be used for well intersections. All underground miners shall be trained in this revised plan within 30 days of submittal.

(k) The miners at the Eagle #3 mine are not represented by a labor union and do not have a miner's representative. The petition is posted at the mine.

In support of the proposed alternative method, the petitioner has also submitted: mine maps indicating well locations, current mining in the area and projected mining in by the gas wells; well production records and charts; schematics showing general cross-sections of casing and tubing; and other relevant facts.

The petitioner asserts that the alternative method proposed will at all times guarantee no less than the same measure of protection afforded the miners under the mandatory standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024-23246 Filed 10-7-24; 8:45 am]

BILLING CODE 4520-43-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by River View Coal, LLC.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA-2024-0043 by any of the following methods:

1. *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA-2024-0043.

2. *Fax:* 202-693-9441.

3. *Email:* petitioncomments@dol.gov.

4. *Regular Mail or Hand Delivery:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202-693-9455 to make an appointment, in keeping with the Department of Labor's COVID-19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202-693-9440 (voice), Petitionsformodification@dol.gov (email), or 202-693-9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any

mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M-2024-021-C.

Petitioner: River View Coal, LLC, 835 State Route 1179, Waverly, KY 42462.

Mine: River View Mine, MSHA ID No. 15-19374, located in Union County, Kentucky.

Regulation Affected: 30 CFR 75.500(d), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.500(d) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) taken into or used in by the last open crosscut. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR-800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

(a) The 3M Versaflo TR-800 PAPR with motor/blower and battery qualifies as intrinsically safe.

(b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

(c) Both the CleanSpace EX and the 3M Versaflo TR-800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

(d) Neither the 3M Versaflo TR-800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

(e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

(f) River View Coal currently makes available to all miners NIOSH-approved high efficiency 100 series respirators to protect the miners against potential exposure to respirable coal mine dust, including crystalline silica, during normal mining conditions. River View Coal desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. PAPRs provide a constant flow of filtered air and serve that purpose.

(g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection*. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR-800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the "fit test" requirement of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

(h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units available that can be taken into or used in by the last open crosscut.

(i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

(a) All miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR-800 or CleanSpace EX PAPR can be used in by the last open crosscut. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR-800 and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512-1 and the examination results recorded in the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR-800 and CleanSpace EX PAPRs to be used in by

the last open crosscut shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The examinations for the 3M Versaflo TR-800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the "power unit" assembly and the battery cannot be removed, reinserted or fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR-800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer's recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR-800 or the CleanSpace EX PAPR in by the last open crosscut, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR-830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133, in the 3M Versaflo TR-800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR-800 PAPR are provided, all battery "change outs" shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR-830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR-830 Battery Pack shall be charged only by a manufacturer's recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR-641N, which includes one 3M Charger Cradle TR-640 and one 3M Power Supply TR-941N, or,

(ii) 3M 4-Station Battery Charger Kit TR-644N, which includes four 3M Charger Cradles TR-640 and one 3M 4-Station Battery Charger Base/Power Supply TR-944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer's recommended battery chargers shall be used, such as the CleanSpace EX Battery Charger, Product Code PAF-0066.

(4) Neither the 3M TR-830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water, allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR-830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR, including the internal battery, shall be used, charged or stored in locations where the manufacturer's recommended temperature limits are exceeded. Neither the 3M Versaflo TR-800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR-800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep a record of such training and provide such record to MSHA upon request.

(k) The miners at River View Coal LLC, River View Mine, are not represented by a labor organization and there are no representatives of miners at the mine. A copy of this petition has been posted on the bulletin board at River View Coal, LLC, River View Mine, on August 30, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the

same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024–23241 Filed 10–7–24; 8:45 am]

BILLING CODE 4520–43–P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by Mettiki Coal WV, LLC.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before November 7, 2024.

ADDRESSES: You may submit comments identified by Docket No. MSHA–2024–0054 by any of the following methods:

1. *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments for MSHA–2024–0054.

2. *Fax:* 202–693–9441.

3. *Email:* petitioncomments@dol.gov.

4. *Regular Mail or Hand Delivery:*

MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202–5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk, 4th Floor West. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202–693–9455 to make an appointment, in keeping with the Department of Labor's COVID–19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202–693–9440 (voice), Petitionsformodification@dol.gov (email), or 202–693–9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part

44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M–2024–031–C.

Petitioner: Mettiki Coal WV, LLC, 293 Table Rock Road, Oakland, MD 21550.

Mine: Mountain View Mine, MSHA ID No. 46–09028, located in Davis, WV.

Regulation Affected: 30 CFR 75.500(d), Permissible electric equipment.

Modification Request: The petitioner requests a modification of 30 CFR 75.500(d) to allow the use of unapproved Powered Air Purifying Respirators (PAPRs) taken into or used in by the last open crosscut. Specifically, the Petitioner is requesting to utilize the CleanSpace EX PAPR and sealed motor/blower/battery power pack assembly, and the 3M Versaflo TR–800 Intrinsically Safe PAPR motor/blower and battery with battery pack.

The petitioner states that:

(a) The 3M Versaflo TR–800 PAPR with motor/blower and battery qualifies as intrinsically safe.

(b) The CleanSpace EX PAPR also qualifies as intrinsically safe.

(c) Both the CleanSpace EX and the 3M Versaflo TR–800 PAPRs provide a constant flow of air inside the mask or helmet. This airflow provides respiratory protection and comfort in hot working conditions.

(d) Neither the 3M Versaflo TR–800 nor the CleanSpace EX PAPR is MSHA-approved as permissible.

(e) Neither the 3M nor the CleanSpace is pursuing MSHA approval.

(f) Mettiki Coal currently makes available to all miners NIOSH-approved high efficiency I00 series respirators to protect the miners against potential exposure to respirable coal mine dust,

including crystalline silica, during normal mining conditions. Mettiki Coal desires to expand the miners' option in choosing a respirator that provides the greatest degree of protection as well as comfort while being worn. PAPRs provide a constant flow of filtered air and serve that purpose.

(g) On June 17, 2024, MSHA finalized the rule *Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection*. The rule requires the mine operator to have a written respiratory protection program in place when miners are required to use respirators. Adding the CleanSpace EX and the 3M TR–800 Versaflo PAPRs to the respiratory protection program as additional options will provide the miners with alternatives to the series 100 high efficiency respirators already in use at the mine. The PAPRs will also serve as a respirator option to protect the miners with facial hair who may not be able to pass the "fit test" requirement of the program. In addition, the positive flow of filtered air provided by the PAPRs will provide a solution for the miners who are unable to wear a tight-fitting respirator.

(h) Since the 3M Airstream Headgear-Mounted PAPR System has been discontinued by the manufacturer, there are no other MSHA-approved units available that can be taken into or used in by the last open crosscut.

(i) The alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

The petitioner proposes the following alternative method:

(a) All miners who will be involved with or affected by the use of the 3M Versaflo TR–800 or CleanSpace EX PAPRs shall receive training in accordance with 30 CFR 48.7 on the requirements of the Proposed Decision and Order (PDO) granted by MSHA and manufacturer guidelines. Such training shall be completed before any 3M Versaflo TR–800 or CleanSpace EX PAPR can be used in by the last open crosscut. The operator shall keep a record of such training and provide such record to MSHA upon request.

(b) The PAPRs, battery packs, and all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defects are found, the PAPR shall be removed from service.

(c) A separate logbook shall be maintained for the 3M Versaflo TR–800 and CleanSpace EX PAPRs that will be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA

upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CFR 75.512–1 and the examination results recorded in the logbook. Examination records shall be maintained for one year.

(d) All 3M Versaflo TR–800 and CleanSpace EX PAPRs to be used inby the last open crosscut shall be physically examined prior to initial use and each unit shall be assigned a unique identification number. Each unit shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition. The examinations for the 3M Versaflo TR–800 PAPRs shall include:

(1) Check the equipment for any physical damage and the integrity of the case.

(2) Remove the battery and inspect for corrosion.

(3) Inspect the contact points to ensure a secure connection to the battery.

(4) Reinsert the battery and power up and shut down to ensure proper connections.

(5) Check the battery compartment cover or battery attachment to ensure that it is securely fastened.

(6) For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

The CleanSpace EX PAPR does not have an accessible/removable battery. The internal battery and motor/blower assembly are both contained within the “power unit” assembly and the battery cannot be removed, reinserted or fastened. Therefore, examination of the CleanSpace EX PAPR shall include any indications of physical damage.

(e) All 3M Versaflo TR–800 and CleanSpace EX PAPR units shall be serviced according to the manufacturer's recommendations.

(f) Prior to energizing and during use of the 3M Versaflo TR–800 or the CleanSpace EX PAPR inby the last open crosscut, procedures in accordance with 30 CFR 75.323 shall be followed.

(g) Only the 3M TR–830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133, in the 3M Versaflo TR–800 PAPR shall be used. Only the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133, in the CleanSpace EX shall be used.

(h) If battery packs for the 3M Versaflo TR–800 PAPR are provided, all battery “change outs” shall occur in intake air outby the last open crosscut.

(i) The following maintenance and use conditions shall apply to equipment containing lithium type batteries:

(1) Neither the 3M TR–830 Battery Pack nor the CleanSpace EX Power Unit shall be disassembled nor modified by anyone other than permitted by the manufacturer of the equipment.

(2) The 3M TR–830 Battery Pack shall be charged only in an area free of combustible material and in intake air outby the last open crosscut. The 3M TR–830 Battery Pack shall be charged only by a manufacturer's recommended battery charger, such as the:

(i) 3M Battery Charger Kit TR–641N, which includes one 3M Charger Cradle TR–640 and one 3M Power Supply TR–941N, or,

(ii) 3M 4-Station Battery Charger Kit TR–644N, which includes four 3M Charger Cradles TR–640 and one 3M 4-Station Battery Charger Base/Power Supply TR–944N.

(3) The CleanSpace EX internal battery, which is contained within the power unit assembly, shall be charged in areas located outby the last open crosscut in intake air and only the manufacturer's recommended battery chargers shall be used, such as the CleanSpace EX Battery Charger, Product Code PAF–0066.

(4) Neither the 3M TR–830 Battery Pack nor the CleanSpace EX power unit which contains the internal battery, shall be exposed to water, allowed to get wet or immersed in liquid. This does not preclude incidental exposure of the 3M TR–830 Battery Pack or the CleanSpace EX power unit assembly.

(5) Neither the 3M Versaflo TR–800 PAPR nor the CleanSpace EX PAPR, including the internal battery, shall be used, charged or stored in locations where the manufacturer's recommended temperature limits are exceeded. Neither the 3M Versaflo TR–800 PAPR nor the CleanSpace EX PAPR shall be placed in direct sunlight nor stored near a source of heat.

(j) Annual retraining shall be given to all miners who will be involved with or affected by the use of the 3M Versaflo TR–800 or CleanSpace EX PAPRs in accordance with 30 CFR 48.8. Training of new miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.5, and training of experienced miners on the requirements of the PDO granted by MSHA in accordance with 30 CFR 48.6 shall be given. The operator shall keep a record of such training and provide such record to MSHA upon request.

(k) The miners at Mettiki Coal WV, LLC, Mountain View Mine, are not represented by a labor organization and there are no representatives of miners at

the mine. A copy of this petition has been posted on the bulletin board at Mettiki Coal WV, LLC, Mountain View Mine, on September 13, 2024.

The petitioner asserts that the alternative method in the petition will at all times guarantee no less than the same measure of protection afforded to the miners by the standard.

Song-ae Aromie Noe,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2024–23238 Filed 10–7–24; 8:45 am]

BILLING CODE 4520–43–P

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

[Docket No. OSHA–2024–0002]

Advisory Committee on Construction Safety and Health (ACCSH): Notice of Meetings

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Notice of ACCSH Committee and Workgroup meetings.

SUMMARY: The Advisory Committee on Construction Safety and Health (ACCSH) will meet October 30, 2024. ACCSH Workgroups will meet on October 29, 2024.

DATES:

ACCSH meeting: ACCSH will meet from 9:00 a.m. to 4:00 p.m., ET, Wednesday, October 30, 2024.

ACCSH Workgroup meetings: ACCSH Workgroups will meet Tuesday, October 29, 2024. (See ACCSH Workgroup Meetings in the **SUPPLEMENTARY INFORMATION** section of this notice for ACCSH Workgroup meetings scheduled times.)

ADDRESSES:

Submission of comments and requests to speak: Submit comments and requests to speak at the ACCSH meeting by Wednesday, October 23, 2024, identified by the docket number for this **Federal Register** notice (Docket No. OSHA–2024–0002), using the following method:

Electronically: Comments and requests to speak, including attachments, must be submitted electronically at: <http://www.regulations.gov>, the Federal eRulemaking Portal. Follow the online instructions for submitting comments.

Requests for special accommodations: Submit requests for special accommodations for this ACCSH meeting by Wednesday, October 23, 2024, to Ms. Gretta Jameson, OSHA,

Directorate of Construction, U.S. Department of Labor; telephone (202) 693–2020; email: jameson.grettah@dol.gov.

FOR FURTHER INFORMATION CONTACT:

For press inquiries: Mr. Frank Meilinger, Director, OSHA Office of Communications, U.S. Department of Labor; telephone (202) 693–1999; email: meilinger.francis2@dol.gov.

For general information about ACCSH: Ms. Terra Gaines, OSHA, Directorate of Construction, U.S. Department of Labor; telephone (202) 693–2483; email: gaines.terra.b@dol.gov.

Telecommunication requirements: For additional information about the telecommunication requirements for the meeting, please contact Ms. Gretta Jameson, OSHA, Directorate of Construction, U.S. Department of Labor; telephone (202) 693–2020; email: jameson.grettah@dol.gov.

For copies of this Federal Register Notice: Electronic copies of this **Federal Register Notice** are available at: <http://www.regulations.gov>. This notice, as well as news releases and other relevant information, are also available on OSHA's website at www.osha.gov.

SUPPLEMENTARY INFORMATION:

I. Background

ACCSH advises the Secretary of Labor and the Assistant Secretary of Labor for Occupational Safety and Health (Assistant Secretary) in the formulation of standards affecting the construction industry, and on policy matters arising in the administration of the safety and health provisions under the Contract Work Hours and Safety Standards Act (Construction Safety Act (CSA)) (40 U.S.C. 3701 *et seq.*) and the Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 651 *et seq.*) (see also 29 CFR 1911.10 and 1912.3). In addition, the CSA and OSHA regulations require the Assistant Secretary to consult with ACCSH before the agency proposes occupational safety and health standards affecting construction activities (40 U.S.C. 3704; 29 CFR 1911.10).

ACCSH operates in accordance with the Federal Advisory Committee Act (FACA), as amended (5 U.S.C. 1001, *et seq.*), and its implementing regulations (41 CFR 102–3 *et seq.*); and Department of Labor Manual Series Chapter 1–900 (3/25/2022). ACCSH generally meets two to four times a year.

II. Meetings

ACCSH Meeting

ACCSH will meet from 9:00 a.m. to 4:00 p.m., ET, Wednesday, October 30, 2024. The meeting is open to the public.

Meeting agenda: The tentative agenda for this meeting includes:

- Directorate of Construction industry update;
- Assistant Secretary's agency update and remarks;
- Hearing Conservation in Construction;
- Women in Construction;
- ACCSH Workgroup reports; and
- Public comment period.

ACCSH Workgroup Meetings

In conjunction with the ACCSH meeting, ACCSH Workgroups will meet on Tuesday, October 29, 2024. ACCSH Workgroup meetings are open to the public.

- Emerging Technology 9:00 a.m. to 11:00 p.m.
- Workzone 12:00 p.m. to 2:00 p.m.
- Health in Construction 2:15 to 4:15 p.m.

III. Meeting Information

The ACCSH Committee and ACCSH Workgroups will meet in Conference Room C–5521, Room 4, U.S. Department of Labor, 200 Constitution Avenue NW, Washington, DC 20210. Public attendance at the ACCSH Committee and Workgroup meetings will be in-person and virtual. In-person attendance will be limited to the first 25 people who register to attend the meetings in person. Please contact Ms. Gretta Jameson, OSHA, Directorate of Construction, U.S. Department of Labor; telephone (202) 693–2020; email: jameson.grettah@dol.gov, to register. In-person meeting attendance registration must be completed by Wednesday, October 23, 2024. Meeting in-person attendees must use the visitor's entrance located at 3rd & C Streets NW. Virtual meeting attendance information will be posted in the Docket (Docket No. OSHA–2024–0002) and on the ACCSH website, <https://www.osha.gov/advisory-committee/accsch>, prior to the meeting.

Requests to speak and speaker presentations: Attendees who wish to address ACCSH must submit a request to speak, as well as any written or electronic presentation, by Wednesday, October 23, 2024, using the method listed in the **ADDRESSES** section of this notice. The request must state:

- The amount of time requested to speak;
- The interest you represent (*e.g.*, business, organization, affiliation), if any; and
- A brief outline of your presentation.

PowerPoint presentations and other electronic materials must be compatible with PowerPoint 2010 and other Microsoft Office 2010 formats.

Alternately, you may request to address ACCSH briefly during the

public-comment period. At her discretion, the ACCSH Chair may grant requests to address ACCSH as time and circumstances permit.

Docket: OSHA will place comments, requests to speak, and speaker presentations, including any personal information you provide, in the public docket without change, and those documents may be available online at: <http://www.regulations.gov>. Therefore, OSHA cautions interested parties about submitting personal information such as Social Security Numbers and birthdates. OSHA also places in the public docket the meeting transcript, meeting minutes, documents presented at the meeting, and other documents pertaining to the ACCSH meeting. These documents are available online at: <http://www.regulations.gov>. To read or download documents in the public docket for this ACCSH meeting, go to Docket No. OSHA–2024–0002 at: <http://www.regulations.gov>. All documents in the public docket are listed in the index; however, some documents (*e.g.*, copyrighted material) are not publicly available to read or download through <http://www.regulations.gov>. All submissions are available for inspection and copying, when permitted, at the OSHA Docket Office. For information on using <http://www.regulations.gov> to make submissions or to access the docket, click on the “Help” tab at the top of the homepage. Contact the OSHA Docket Office at (202) 693–2350, (TTY (877) 889–5627) for information about materials not available through that website and for assistance in using the internet to locate submissions and other documents in the docket.

Authority and Signature

James S. Frederick, Deputy Assistant Secretary of Labor for Occupational Safety and Health, authorized the preparation of this notice pursuant to 29 U.S.C. 655, 40 U.S.C. 3704, Secretary of Labor's Order No. 8–2020 (85 FR 58393), 5 U.S.C. 1001, *et seq.*, and 29 CFR part 1912.

Signed at Washington, DC, on October 2, 2024.

James S. Frederick,

Deputy Assistant Secretary of Labor for Occupational Safety and Health.

[FR Doc. 2024–23244 Filed 10–7–24; 8:45 am]

BILLING CODE 4510–26–P

DEPARTMENT OF LABOR**Occupational Safety and Health Administration****[Docket No. OSHA–2011–0195]****Acrylonitrile Standard; Extension of the Office of Management and Budget's (OMB) Approval of Information Collection (Paperwork) Requirements****AGENCY:** Occupational Safety and Health Administration (OSHA), Labor.**ACTION:** Request for public comments.**SUMMARY:** OSHA solicits public comments concerning the proposal to extend the Office of Management and Budget's (OMB) approval of the information collection requirements specified in the Acrylonitrile Standard.**DATES:** Comments must be submitted (postmarked, sent, or received) by December 9, 2024.**ADDRESSES:**

Electronically: You may submit comments and attachments electronically at <https://www.regulations.gov>, which is the Federal eRulemaking Portal. Follow the instructions online for submitting comments.

Docket: To read or download comments or other material in the docket, go to <https://www.regulations.gov>. Documents in the docket are listed in the <https://www.regulations.gov> index; however, some information (e.g., copyrighted material) is not publicly available to read or download through the websites. All submissions, including copyrighted material, are available for inspection through the OSHA Docket Office. Contact the OSHA Docket Office at (202) 693–2350 (TTY (877) 889–5627) for assistance in locating docket submissions.

Instructions: All submissions must include the agency name and OSHA docket number (OSHA–2011–0195) for the Information Collection Request (ICR). OSHA will place all comments, including any personal information, in the public docket, which may be made available online. Therefore, OSHA cautions interested parties about submitting personal information such as social security numbers and birthdates.

For further information on submitting comments, see the “Public Participation” heading in the section of this notice titled **SUPPLEMENTARY INFORMATION**.

FOR FURTHER INFORMATION CONTACT:

Seleda Perryman, Directorate of Standards and Guidance, OSHA, U.S.

Department of Labor; telephone (202) 693–2222.

SUPPLEMENTARY INFORMATION:**I. Background**

The Department of Labor, as part of the continuing effort to reduce paperwork and respondent (i.e., employer) burden, conducts a preclearance consultation program to provide the public with an opportunity to comment on proposed and continuing information collection requirements in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)). This program ensures that information is in the desired format, reporting burden (time and costs) is minimal, the collection instruments are clearly understood, and OSHA's estimate of the information collection burden is accurate. The Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 651 *et seq.*) authorizes information collection by employers as necessary or appropriate for enforcement of the OSH Act or for developing information regarding the causes and prevention of occupational injuries, illnesses, and accidents (29 U.S.C. 657). The OSH Act also requires that OSHA obtain such information with minimum burden upon employers, especially those operating small businesses, and to reduce to the maximum extent feasible unnecessary duplication of effort in obtaining information (29 U.S.C. 657).

The following sections describe who uses the information collected under each requirement, as well as how they use it. The purpose of the requirements specified in the Acrylonitrile (AN) Standard (29 CFR 1910.1045) are to provide worker protection from the adverse health effects that may result from their exposure to AN.

The major information collection requirements of the AN Standard include notifying workers of their AN exposures, implementing a written compliance program, providing examining physicians with specific information, ensuring that workers receive a copy of their medical examination results, maintaining worker's exposure monitoring and medical records for specific periods, and providing access to these records by OSHA, the National Institute for Occupational Safety and Health (NIOSH), the affected workers, and designated representatives.

II. Special Issues for Comment

OSHA has a particular interest in comments on the following issues:

- Whether the proposed information collection requirements are necessary

for the proper performance of the agency's functions to protect workers, including whether the information is useful;

- The accuracy of OSHA's estimate of the burden (time and costs) of the information collection requirements, including the validity of the methodology and assumptions used;
- The quality, utility, and clarity of the information collected; and
- Ways to minimize the burden on employers who must comply; for example, by using automated or other technological information, and transmission techniques.

III. Proposed Actions

OSHA is requesting that OMB extend the approval of the information collection requirements contained in the Acrylonitrile Standard. The agency is requesting an adjustment decrease in burden from 14,706 to 11,373 hours, a difference of 3,333 hours. This decrease in burden is due to a decrease in the number of employees and the number of establishments. Also, the agency is requesting a decrease in cost from \$1,164,653 to \$930,142, a difference of \$234,511.

OSHA will summarize the comments submitted in response to this notice and will include this summary in the request to OMB to extend the approval of the information collection requirements.

Type of Review: Extension of a currently approved collection.

Title: Acrylonitrile Standard.

OMB Control Number: 1218–0126.

Affected Public: Business or other for-profits.

Number of Respondents: 104.

Number of Responses: 25,937.

Frequency of Responses: On occasion.

Average Time per Response: Varies.

Estimated Total Burden Hours: 11,373.

Estimated Cost (Operation and Maintenance): \$930,142.

IV. Public Participation—Submission of Comments on this Notice and Internet Access to Comments and Submissions

You may submit comments in response to this document as follows: (1) electronically at <https://www.regulations.gov>, which is the Federal eRulemaking Portal; or (2) by facsimile (fax), if your comments, including attachments, are not longer than 10 pages you may fax them to the OSHA Docket Office at (202) 693–1648. All comments, attachments, and other material must identify the agency name and the OSHA docket number for the ICR (Docket No. OSHA–2011–0195). You may supplement electronic

submission by uploading document files electronically.

Comments and submissions are posted without change at <https://www.regulations.gov>. Therefore, OSHA cautions commenters about submitting personal information such as social security numbers and dates of birth. Although all submissions are listed in the <https://www.regulations.gov> index, some information (e.g., copyrighted material) is not publicly available to read or download from this website. All submission, including copyrighted material, are available for inspection and copying at the OSHA Docket Office. Information on using the <https://www.regulations.gov> website to submit comments and access the docket is available at the website's "User Tips" link. Contact the OSHA Docket Office at (202) 693-2350, (TTY) (877) 889-5627 for information about materials not available from the website, and for assistance in using the internet to locate docket submissions.

V. Authority and Signature

James S. Frederick, Deputy Assistant Secretary of Labor for Occupational Safety and Health, directed the preparation of this notice. The authority for this notice is the Paperwork Reduction Act of 1995 (44 U.S.C. 3506 *et seq.*) and Secretary of Labor's Order No. 8-2020 (85 FR 58393).

Signed at Washington, DC, on October 1, 2024.

James S. Frederick,

Deputy Assistant Secretary of Labor for Occupational Safety and Health.

[FR Doc. 2024-23236 Filed 10-7-24; 8:45 am]

BILLING CODE 4510-26-P

DEPARTMENT OF LABOR

Office of Workers' Compensation Programs

Advisory Board on Toxic Substances and Worker Health

AGENCY: Office of Workers' Compensation Programs, Labor.

ACTION: Announcement of meeting of the Advisory Board on Toxic Substances and Worker Health (Advisory Board) for the Energy Employees Occupational Illness Compensation Program Act (EEOICPA).

DATES: The Advisory Board will meet October 30, 2024, via teleconference, from 10 a.m. to 4:00 p.m. Eastern time.

ADDRESSES: Submission of comments, materials for the record, and requests for special accommodations: You must submit comments, materials, and

requests for accommodations by October 23, 2024, identified by the Advisory Board name and the meeting date of October 30, 2024, by any of the following methods:

- **Electronically:** Send to: EnergyAdvisoryBoard@dol.gov (specify in the email subject line, for example "Request to Speak: Advisory Board on Toxic Substances and Worker Health").
- **Mail, express delivery, hand delivery, messenger, or courier service:** Submit one copy to the following address: U.S. Department of Labor, Office of Workers' Compensation Programs, Advisory Board on Toxic Substances and Worker Health, Room S-3522, 200 Constitution Ave. NW, Washington, DC 20210.

Instructions: Your submissions must include the Agency name (OWCP), the committee name (the Advisory Board), and the meeting date (October 30). Due to security-related procedures, receipt of submissions by regular mail may experience significant delays. For additional information about submissions, see the **SUPPLEMENTARY INFORMATION** section of this notice.

OWCP will make available publicly, without change, any comments, including any personal information that you provide. Therefore, OWCP cautions interested parties against submitting personal information such as Social Security numbers and birthdates.

FOR FURTHER INFORMATION CONTACT: For press inquiries: Ms. Laura McGinnis, Office of Public Affairs, U.S. Department of Labor, Room S-1028, 200 Constitution Ave. NW, Washington, DC 20210; telephone (202) 693-4672; email McGinnis.Laura@DOL.GOV.

SUPPLEMENTARY INFORMATION: The Advisory Board will meet via teleconference on Wednesday, October 30, 2024, from 10:00 a.m. to 4:00 p.m. Eastern time. The teleconference number and other details for participating remotely will be posted on the Advisory Board's website, <http://www.dol.gov/owcp/energy/regs/compliance/AdvisoryBoard.htm>, 72 hours prior to the commencement of the first meeting date. Advisory Board meetings are open to the public.

The Advisory Board is mandated by Section 3687 of EEOICPA. The Secretary of Labor established the Board under this authority and Executive Order 13699 (June 26, 2015). The purpose of the Advisory Board is to advise the Secretary with respect to: (1) the Site Exposure Matrices (SEM) of the Department of Labor; (2) medical guidance for claims examiners for claims with the EEOICPA program, with respect to the weighing of the medical

evidence of claimants; (3) evidentiary requirements for claims under Part B of EEOICPA related to lung disease; (4) the work of industrial hygienists and staff physicians and consulting physicians of the Department of Labor and reports of such hygienists and physicians to ensure quality, objectivity, and consistency; (5) the claims adjudication process generally, including review of procedure manual changes prior to incorporation into the manual and claims for medical benefits; and (6) such other matters as the Secretary considers appropriate. The Advisory Board sunsets on December 19, 2029.

The Advisory Board operates in accordance with the Federal Advisory Committee Act (FACA) (5 U.S.C. app. 2) and its implementing regulations (41 CFR part 102-3).

Agenda: The tentative agenda for the Advisory Board meeting includes:

- Review and follow-up on Advisory Board's previous recommendations, data requests, and action items;
- Conduct Ethics, FACA, and EEOICPA training sessions;
- Review responses to submitted Board questions;
- Working group review;
- Claims review;
- Review of Board tasks, structure and work agenda; and
- Consideration of any new issues.

OWCP transcribes and prepares detailed minutes of Advisory Board meetings. OWCP posts the transcripts and minutes on the Advisory Board web page, <http://www.dol.gov/owcp/energy/regs/compliance/AdvisoryBoard.htm>, along with written comments, speaker presentations, and other materials submitted to the Advisory Board or presented at Advisory Board meetings.

Public Participation, Submissions and Access to Public Record

Advisory Board meetings: All Advisory Board meetings are open to the public. Information on how to participate in the meeting remotely will be posted on the Advisory Board's website.

Submission of written comments for the record: You may submit comments using one of the methods listed in the **SUMMARY** section. Your submission must include the Agency name (OWCP) and date for this Advisory Board meeting (October 30, 2024). OWCP will post your comments on the Advisory Board website and provide your submissions to Advisory Board members.

Because of security-related procedures, receipt of submissions by regular mail may experience significant delays.

Electronic copies of this **Federal Register** notice are available at <http://www.regulations.gov>. This notice, as well as news releases and other relevant information, are also available on the Advisory Board's web page at <http://www.dol.gov/owcp/energy/regs/compliance/AdvisoryBoard.htm>.

For further information regarding this meeting, you may contact Ryan Jansen, Designated Federal Officer, at jansen.ryan@dol.gov, or Carrie Rhoads, Alternate Designated Federal Officer, at rhoads.carrie@dol.gov, U.S. Department of Labor, 200 Constitution Avenue NW, Suite S-3524, Washington, DC 20210, telephone (202) 343-5580.

This is not a toll-free number.

Signed at Washington, DC, this 3rd day of October, 2024.

Christopher Godfrey,
Director, Office of Workers' Compensation Programs.

[FR Doc. 2024-23266 Filed 10-7-24; 8:45 am]

BILLING CODE 4510-CR-P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on the Medical Uses of Isotopes: Meeting Notice

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Notice of meeting.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) will convene a meeting of the Advisory Committee on the Medical Uses of Isotopes (ACMUI) on November 4-5, 2024. A sample of agenda items to be discussed during the public session includes: an overview of the Advance Act; an update on the Medical Radiation Safety Team's activities; ACMUI bylaws update; status of patient release guidance revision; NRC review of recent yttrium-90 microsphere medical events; and NRC evaluation of current patient waste regulations and guidance. The agenda is subject to change. The current agenda

and any updates will be available on the ACMUI's Meetings and Related Documents web page at <https://www.nrc.gov/reading-rm/doc-collections/acmui/meetings/2024.html> or by emailing Ms. L. Armstead and T. Roszkowski at the contact information below.

Purpose: Discuss issues related to 10 CFR part 35 Medical Use of Byproduct Material.

Date and Time for Open Sessions: November 4, 2024, from 10:00 a.m. to 4:35 p.m. EST.

Date and Time for Closed Session: November 5, 2024, from 9:30 a.m. to 11:30 a.m. EST. This session will be closed to conduct the ACMUI's required annual training.

Address for Public Meeting: This is a virtual meeting

Date	Webinar information (Microsoft Teams)
November 4-5, 2024	Link: https://teams.microsoft.com/l/meetup-join/19%3ameeting_M2Q3MzczZWUtNGUxZS00ZWNILThmNmUtNjM4Y2ZhYTxyTA0%40thread.v2/0?context=%7b%22Tid%22%3a%22e8d01475-c3b5-436a-a065-5def4c64f52e%22%2c%22Oid%22%3a%22304f46bf-32c2-4e0f-912c-878db895e74a%22%7d Meeting ID: 294 578 901 723. Passcode: UaHF5t. Call in number (audio only): +1 301-576-2978, Silver Spring, MD. Phone Conference ID: 277 173 020#.

Public Participation: Any member of the public who wishes to participate in the teleconference should contact Ms. Armstead and Ms. Roszkowski using the contact information below.

Contact Information: Ms. L. Armstead, email: lxa5@nrc.gov and Ms. T. Roszkowski, email: vnr@nrc.gov.

Conduct of the Meeting

The ACMUI Chair, Dr. Hossein Jadvar, will preside over the meeting. Dr. Jadvar will conduct the meeting in a manner that will facilitate the orderly conduct of business. The following procedures apply to public participation in the meeting:

1. Persons who wish to provide a written statement should submit an electronic copy to Ms. L. Armstead and Ms. T. Roszkowski using the contact information listed above. All submittals must be received by the close of business on October 29, 2024, and must only pertain to the topics on the agenda.

2. Questions and comments from members of the public will be permitted during the meeting, at the discretion of the ACMUI Chair.

3. The draft transcript and meeting summary will be available on ACMUI's website <https://www.nrc.gov/reading-rm/doc-collections/acmui/meetings/2024.html> on or about December 17, 2024.

4. Persons who require special services, such as those for the hearing impaired, should notify Ms. L. Armstead and Ms. T. Roszkowski of their planned participation.

This meeting will be held in accordance with the Atomic Energy Act of 1954, as amended (primarily Section 161a); the Federal Advisory Committee Act (5 U.S.C. App); and the Commission's regulations in title 10 of the *Code of Federal Regulations*, part 7.

Dated at Rockville, Maryland this 3rd day of October, 2024.

For the U.S. Nuclear Regulatory Commission.

Russell E. Chazell,

Federal Advisory Committee Management Officer.

[FR Doc. 2024-23168 Filed 10-7-24; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

[Docket No. 70-3103; NRC-2024-0176]

Louisiana Energy Services, LLC, dba Urenco USA; National Enrichment Facility; License Amendment Application

AGENCY: Nuclear Regulatory Commission.

ACTION: Opportunity to request a hearing and to petition for leave to intervene; order imposing procedures.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) staff accepted and docketed an application for the amendment of Special Nuclear Materials License No. SNM-2010, submitted by Louisiana Energy Services, LLC, dba Urenco USA dated November 30, 2023. The amended license would authorize the applicant to modify the National Enrichment Facility, located in Eunice, New Mexico, to increase enrichment from 5.5 weight percent Uranium-235 (U-235) to less than 10 weight percent U-235. Because this amendment request contains Sensitive

Unclassified Non-Safeguards Information (SUNSI), an order imposes procedures to obtain access to SUNSI and Safeguards Information (SGI) for contention preparation.

DATES: Requests for a hearing or petition for leave to intervene must be filed by December 9, 2024. Any potential party as defined in section 2.4 of title 10 of the *Code of Federal Regulations* (10 CFR) who believes access to SUNSI and/or SGI is necessary to respond to this notice must request document access by October 18, 2024.

ADDRESSES: Please refer to Docket ID NRC-2024-0176 when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- *Federal Rulemaking website:* Go to <https://www.regulations.gov> and search for Docket ID NRC-2024-0176. Address questions about Docket IDs in *Regulations.gov* to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION**

CONTACT section of this document.

- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search." For

problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by email to PDR.Resource@nrc.gov. The license amendment request is available in ADAMS under Accession No. ML23334A122.

- *NRC's PDR:* The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT:

Jonathan Rowley, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-4053; email: Jonathan.Rowley@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Discussion

The NRC has received, by letter dated November 30, 2023, an application from Louisiana Energy Services, LLC, dba Urenco USA, to amend materials license SNM-2010 at the National Enrichment Facility, located five miles east of Eunice, New Mexico. The National Enrichment Facility is a gas centrifuge uranium enrichment facility authorized to possess, use, and store special nuclear material (SNM), source material,

and byproduct material. This amendment request proposes an increase of the enrichment limit in SNM-2010 license from 5.5 weight percent Uranium 235 (U-235) to less than 10 weight percent U-235, which Urenco USA calls Low Enriched Uranium Plus (LEU+). The scope of the request is limited to the systems, structures, and components necessary for the production, handling, and storage of the LEU+ at the Urenco USA site.

As documented in an administrative completeness review, dated March 1, 2024, NRC found the application, as supplemented, acceptable for a technical review. During the technical review, the NRC will review the application, as supplemented, in areas that include, but are not limited to, radiation safety, chemical safety, fire safety, security, environmental protection, and material control/accountability. Prior to reaching a decision on the request to amend SNM-2010, the NRC will need to conduct a review and make a determination in accordance with the Atomic Energy Act of 1954, as amended (the Act), and the NRC's regulations. The NRC's findings will be documented in a safety evaluation report.

II. Availability of Documents

The documents identified in the following table are available to interested persons through ADAMS.

Document description	ADAMS accession No.
Louisiana Energy Services, LLC, dba Urenco USA, License Amendment Request for Changes to License Conditions and Raise Enrichment Limit to Less Than 10 Weight Percent for LEU+ Production Systems (LAR-23-02), dated November 30, 2023.	ML23334A122.
Enclosure 1—Louisiana Energy Services, LLC, Affidavit, dated November 30, 2023	ML23334A123.
Enclosure 2—Description of Proposed Changes and Appendix A	ML23334A124 (non-public, withheld pursuant to 10 CFR 2.390).
Enclosure 3—Safety Analysis Report Markups	ML23334A125.
Enclosure 4—Integrated Safety Assessment Markups	ML23334A126 (non-public, withheld pursuant to 10 CFR 2.390).
Enclosure 5—Integrated Safety Assessment Changes Incorporated	ML23334A127 (non-public, withheld pursuant to 10 CFR 2.390).
Enclosure 6—Fundamental Nuclear Material Control Program Markups	ML23334A128 (non-public, withheld pursuant to 10 CFR 2.390).
Enclosure 7—Emergency Plan Markups	ML23334A129 (non-public, withheld pursuant to 10 CFR 2.390).
Enclosure 8—Environmental Information	ML23334A130.
Acceptance for review of UUSA License Amendment Request for Changes to License Conditions and Raise Enrichment Limit to Less than 10 Weight percent for LEU+ Production Systems, dated March 1, 2024.	ML24052A385.
Letter and Enclosure 1: Request for Additional Information Regarding LES License Amendment Request for Changes to License Conditions and Raise Enrichment Limit for LEU+ and Urenco USA Responses, dated July 12, 2024.	ML24187A155.
Enclosure 2: Request for Additional Information Regarding LES License Amendment Request 23-02—Changes To License Conditions and Raise Enrichment Limit to Less than 10 Weight Percent for Low Enriched Uranium Plus Production Systems, dated July 12, 2024.	ML24193A241 (non-public, withheld pursuant to 10 CFR 2.390).
Cover Letter—Responses to Requests for Additional Information, dated August 1, 2024	ML24214A300.
Enclosure 1: UUSA Response to MC&A RAIs, dated August 1, 2024	ML24214A301 (non-public, withheld pursuant to 10 CFR 2.390).

Document description	ADAMS accession No.
Enclosure 2: UUSA Responses to Human Factors Engineering and Environmental RAIs, dated August 1, 2024.	ML24214A302.
Cover Letter—Request for Additional Information Regarding Louisiana Energy Services, LLC License Amendment Request 23–02—Changes to License Conditions and Raise Enrichment Limit to less than 10 Weight Percent for LEU+ Production Systems (Part 2), dated September 16, 2024.	ML24248A189.
Enclosure 1—Request for Additional Information for the Integrated Safety Analysis Louisiana Energy Services, LLC, dated September 16, 2024.	ML24248A190 (non-public, withheld pursuant to 10 CFR 2.390).
Enclosure 2—Request for Additional Information Louisiana Energy Services, LLC dba Urenco USA License Amendment Request Nuclear Criticality Safety, dated September 16, 2024.	ML24248A191 (non-public, withheld pursuant to 10 CFR 2.390).

III. Opportunity To Request a Hearing and Petition for Leave To Intervene

Within 60 days after the date of publication of this notice, any person (petitioner) whose interest may be affected by this action may file a request for a hearing and petition for leave to intervene (petition) with respect to the action. Petitions shall be filed in accordance with the Commission's "Agency Rules of Practice and Procedure" in 10 CFR part 2. Interested persons should consult 10 CFR 2.309. If a petition is filed, the presiding officer will rule on the petition and, if appropriate, a notice of a hearing will be issued.

Petitions must be filed no later than 60 days from the date of publication of this notice in accordance with the filing instructions in the "Electronic Submissions (E-Filing)" section of this document. Petitions and motions for leave to file new or amended contentions that are filed after the deadline will not be entertained absent a determination by the presiding officer that the filing demonstrates good cause by satisfying the three factors in 10 CFR 2.309(c)(1)(i) through (iii).

A State, local governmental body, Federally recognized Indian Tribe, or designated agency thereof, may submit a petition to the Commission to participate as a party under 10 CFR 2.309(h) no later than 60 days from the date of publication of this notice. Alternatively, a State, local governmental body, Federally recognized Indian Tribe, or designated agency thereof may participate as a non-party under 10 CFR 2.315(c).

For information about filing a petition and about participation by a person not a party under 10 CFR 2.315, see ADAMS Accession No. ML20340A053 (<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML20340A053>) and on the NRC public website at <https://www.nrc.gov/about-nrc/regulatory/adjudicatory/hearing.html#participate>.

IV. Electronic Submissions (E-Filing)

All documents filed in NRC adjudicatory proceedings, including

documents filed by an interested State, local governmental body, Federally recognized Indian Tribe, or designated agency thereof that requests to participate under 10 CFR 2.315(c), must be filed in accordance with 10 CFR 2.302. The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases, to mail copies on electronic storage media, unless an exemption permitting an alternative filing method, as further discussed, is granted. Detailed guidance on electronic submissions is located in the "Guidance for Electronic Submissions to the NRC" (ADAMS Accession No. ML13031A056) and on the NRC's public website at <https://www.nrc.gov/site-help/e-submittals.html>.

To comply with the procedural requirements of E-Filing, at least 10 days prior to the filing deadline, the participant should contact the Office of the Secretary by email at Hearing.Docket@nrc.gov, or by telephone at 301-415-1677, to (1) request a digital identification (ID) certificate, which allows the participant (or its counsel or representative) to digitally sign submissions and access the E-Filing system for any proceeding in which it is participating; and (2) advise the Secretary that the participant will be submitting a petition or other adjudicatory document (even in instances in which the participant, or its counsel or representative, already holds an NRC-issued digital ID certificate). Based upon this information, the Secretary will establish an electronic docket for the proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on the NRC's public website at <https://www.nrc.gov/site-help/e-submittals/getting-started.html>. After a digital ID certificate is obtained and a docket created, the participant must submit adjudicatory documents in Portable Document Format. Guidance on submissions is available on the NRC's public website at <https://www.nrc.gov/site-help/electronic-sub-ref-mat.html>. A

filing is considered complete at the time the document is submitted through the NRC's E-Filing system. To be timely, an electronic filing must be submitted to the E-Filing system no later than 11:59 p.m. ET on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an email confirming receipt of the document. The E-Filing system also distributes an email that provides access to the document to the NRC's Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the document on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before adjudicatory documents are filed to obtain access to the documents via the E-Filing system.

A person filing electronically using the NRC's adjudicatory E-Filing system may seek assistance by contacting the NRC's Electronic Filing Help Desk through the "Contact Us" link located on the NRC's public website at <https://www.nrc.gov/site-help/e-submittals.html>, by email to MSHD.Resource@nrc.gov, or by a toll-free call at 1-866-672-7640. The NRC Electronic Filing Help Desk is available between 9 a.m. and 6 p.m., ET, Monday through Friday, except Federal holidays.

Participants who believe that they have good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their initial paper filing stating why there is good cause for not filing electronically and requesting authorization to continue to submit documents in paper format. Such filings must be submitted in accordance with 10 CFR 2.302(b)–(d). Participants filing adjudicatory documents in this manner are responsible for serving their documents on all other participants. Participants granted an exemption under 10 CFR 2.302(g)(2) must still meet the electronic formatting requirement in 10 CFR 2.302(g)(1), unless the

participant also seeks and is granted an exemption from 10 CFR 2.302(g)(1).

Documents submitted in adjudicatory proceedings will appear in the NRC's electronic hearing docket, which is publicly available at <https://adams.nrc.gov/ehd>, unless excluded pursuant to an order of the presiding officer. If you do not have an NRC-issued digital ID certificate as previously described, click "cancel" when the link requests certificates and you will be automatically directed to the NRC's electronic hearing docket where you will be able to access any publicly available documents in a particular hearing docket. Participants are requested not to include personal privacy information such as social security numbers, home addresses, or personal phone numbers in their filings unless an NRC regulation or other law requires submission of such information. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants should not include copyrighted materials in their submission.

Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation

A. This Order contains instructions regarding how potential parties to this proceeding may request access to documents containing sensitive unclassified information (including Sensitive Unclassified Non-Safeguards Information (SUNSI) and Safeguards Information (SGI)). Requirements for access to SGI are primarily set forth in 10 CFR parts 2 and 73. Nothing in this Order is intended to conflict with the SGI regulations.

B. Within 10 days after publication of this notice of hearing or opportunity for hearing, any potential party who believes access to SUNSI or SGI is necessary to respond to this notice may request access to SUNSI or SGI. A "potential party" is any person who intends to participate as a party by demonstrating standing and filing an admissible contention under 10 CFR 2.309. Requests for access to SUNSI or SGI submitted later than 10 days after publication will not be considered absent a showing of good cause for the late filing, addressing why the request could not have been filed earlier.

C. The requestor shall submit a letter requesting permission to access SUNSI, SGI, or both to the Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555–

0001, Attention: Rulemakings and Adjudications Staff, and provide a copy to the Deputy General Counsel for Licensing, Hearings, and Enforcement, Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The expedited delivery or courier mail address for both offices is: U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Rockville, Maryland 20852. The email addresses for the Office of the Secretary and the Office of the General Counsel are Hearing.Docket@nrc.gov and RidsOgcMailCenter.Resource@nrc.gov, respectively.¹ The request must include the following information:

(1) A description of the licensing action with a citation to this **Federal Register** notice;

(2) The name and address of the potential party and a description of the potential party's particularized interest that could be harmed by the action identified in C.(1);

(3) If the request is for SUNSI, the identity of the individual or entity requesting access to SUNSI and the requestor's basis for the need for the information in order to meaningfully participate in this adjudicatory proceeding. In particular, the request must explain why publicly available versions of the information requested would not be sufficient to provide the basis and specificity for a proffered contention; and

(4) If the request is for SGI, the identity of each individual who would have access to SGI if the request is granted, including the identity of any expert, consultant, or assistant who will aid the requestor in evaluating the SGI. In addition, the request must contain the following information:

(a) A statement that explains each individual's "need to know" the SGI, as required by 10 CFR 73.2 and 10 CFR 73.22(b)(1). Consistent with the definition of "need to know" as stated in 10 CFR 73.2, the statement must explain:

(i) Specifically, why the requestor believes that the information is necessary to enable the requestor to proffer and/or adjudicate a specific contention in this proceeding;² and

¹ While a request for hearing or petition to intervene in this proceeding must comply with the filing requirements of the NRC's "E-Filing Rule," the initial request to access SUNSI and/or SGI under these procedures should be submitted as described in this paragraph.

² Broad SGI requests under these procedures are unlikely to meet the standard for need to know; furthermore, NRC staff redaction of information from requested documents before their release may be appropriate to comport with this requirement. These procedures do not authorize unrestricted

(ii) The technical competence (demonstrable knowledge, skill, training or education) of the requestor to effectively utilize the requested SGI to provide the basis and specificity for a proffered contention. The technical competence of a potential party or its counsel may be shown by reliance on a qualified expert, consultant, or assistant who satisfies these criteria.

(b) A completed Form SF–85, "Questionnaire for Non-Sensitive Positions," for each individual who would have access to SGI. The completed Form SF–85 will be used by the Office of Administration to conduct the background check required for access to SGI, as required by 10 CFR part 2, subpart C, and 10 CFR 73.22(b)(2), to determine the requestor's trustworthiness and reliability. For security reasons, Form SF–85 can only be submitted electronically through the National Background Investigation Services e-App system, a secure website that is owned and operated by the Defense Counterintelligence and Security Agency (DCSA). To obtain online access to the form, the requestor should contact the NRC's Office of Administration at 301–415–3710.³

(c) A completed Form FD–258 (fingerprint card), signed in original ink, and submitted in accordance with 10 CFR 73.57(d). Copies of Form FD–258 will be provided in the background check request package supplied by the Office of Administration for each individual for whom a background check is being requested. The fingerprint card will be used to satisfy the requirements of 10 CFR part 2, subpart C, 10 CFR 73.22(b)(1), and Section 149 of the Atomic Energy Act of 1954, as amended, which mandates that all persons with access to SGI must be fingerprinted for an FBI identification and criminal history records check.

(d) A check or money order payable in the amount of \$310.00⁴ to the U.S. Nuclear Regulatory Commission for each individual for whom the request for access has been submitted.

(e) If the requestor or any individual(s) who will have access to SGI believes they belong to one or more of the categories of individuals that are exempt from the criminal history

disclosure or less scrutiny of a requestor's need to know than ordinarily would be applied in connection with an already-admitted contention or non-adjudicatory access to SGI.

³ The requestor will be asked to provide the requestor's full name, social security number, date and place of birth, telephone number, and email address. After providing this information, the requestor usually should be able to obtain access to the online form within one business day.

⁴ This fee is subject to change pursuant to DCSA's adjustable billing rates.

records check and background check requirements in 10 CFR 73.59, the requestor should also provide a statement identifying which exemption the requestor is invoking and explaining the requestor's basis for believing that the exemption applies. While processing the request, the Office of Administration, Personnel Security Branch, will make a final determination whether the claimed exemption applies. Alternatively, the requestor may contact the Office of Administration for an evaluation of their exemption status prior to submitting their request. Persons who are exempt from the background check are not required to complete the SF-85 or Form FD-258; however, all other requirements for access to SGI, including the need to know, are still applicable.

Note: Copies of documents and materials required by paragraphs C.(4)(b), (c), and (d) of this Order must be sent to the following address: U.S. Nuclear Regulatory Commission, Office of Administration, ATTN: Personnel Security Branch, Mail Stop: TWFN-07D04M, 11555 Rockville Pike, Rockville, MD 20852.

These documents and materials should *not* be included with the request letter to the Office of the Secretary, but the request letter should state that the forms and fees have been submitted as required.

D. To avoid delays in processing requests for access to SGI, the requestor should review all submitted materials for completeness and accuracy (including legibility) before submitting them to the NRC. The NRC will return incomplete packages to the sender without processing.

E. Based on an evaluation of the information submitted under paragraphs C.(3) or C.(4), as applicable, the NRC staff will determine within 10 days of receipt of the request whether:

(1) There is a reasonable basis to believe the petitioner is likely to establish standing to participate in this NRC proceeding; and

(2) The requestor has established a legitimate need for access to SUNSI or need to know the SGI requested.

F. For requests for access to SUNSI, if the NRC staff determines that the requestor satisfies both E.(1) and E.(2), the NRC staff will notify the requestor in writing that access to SUNSI has been granted. The written notification will contain instructions on how the requestor may obtain copies of the requested documents, and any other conditions that may apply to access to those documents. These conditions may include, but are not limited to, the signing of a Non-Disclosure Agreement or Affidavit, or Protective Order setting

forth terms and conditions to prevent the unauthorized or inadvertent disclosure of SUNSI by each individual who will be granted access to SUNSI.⁵

G. For requests for access to SGI, if the NRC staff determines that the requestor has satisfied both E.(1) and E.(2), the Office of Administration will then determine, based upon completion of the background check, whether the proposed recipient is trustworthy and reliable, as required for access to SGI by 10 CFR 73.22(b). If the Office of Administration determines that the individual or individuals are trustworthy and reliable, the NRC will promptly notify the requestor in writing. The notification will provide the names of approved individuals as well as the conditions under which the SGI will be provided. Those conditions may include, but are not limited to, the signing of a Non-Disclosure Agreement or Affidavit, or Protective Order⁶ by each individual who will be granted access to SGI.

H. Release and Storage of SGI. Prior to providing SGI to the requestor, the NRC staff will conduct (as necessary) an inspection to confirm that the recipient's information protection system is sufficient to satisfy the requirements of 10 CFR 73.22. Alternatively, recipients may opt to view SGI at an approved SGI storage location rather than establish their own SGI protection program to meet SGI protection requirements.

I. Filing of Contentions. Any contentions in these proceedings that are based upon the information received as a result of the request made for SUNSI or SGI must be filed by the requestor no later than 25 days after receipt of (or access to) that information. However, if more than 25 days remain between the petitioner's receipt of (or access to) the information and the deadline for filing all other contentions (as established in the notice of hearing or opportunity for hearing), the petitioner may file its SUNSI or SGI contentions by that later deadline.

J. Review of Denials of Access.

(1) If the request for access to SUNSI or SGI is denied by the NRC staff either after a determination on standing and

requisite need, or after a determination on trustworthiness and reliability, the NRC staff shall immediately notify the requestor in writing, briefly stating the reason or reasons for the denial.

(2) Before the Office of Administration makes a final adverse determination regarding the trustworthiness and reliability of the proposed recipient(s) for access to SGI, the Office of Administration, in accordance with 10 CFR 2.336(f)(1)(iii), must provide the proposed recipient(s) any records that were considered in the trustworthiness and reliability determination, including those required to be provided under 10 CFR 73.57(e)(1), so that the proposed recipient(s) have an opportunity to correct or explain the record.

(3) The requestor may challenge the NRC staff's adverse determination with respect to access to SUNSI or with respect to standing or need to know for SGI by filing a challenge within 5 days of receipt of that determination with: (a) the presiding officer designated in this proceeding; (b) if no presiding officer has been appointed, the Chief Administrative Judge, or if this individual is unavailable, another administrative judge, or an Administrative Law Judge with jurisdiction pursuant to 10 CFR 2.318(a); or (c) if another officer has been designated to rule on information access issues, with that officer.

(4) The requestor may challenge the Office of Administration's final adverse determination with respect to trustworthiness and reliability for access to SGI by filing a request for review in accordance with 10 CFR 2.336(f)(1)(iv). (5) Further appeals of decisions under this paragraph must be made pursuant to 10 CFR 2.311.

K. Review of Grants of Access. A party other than the requestor may challenge an NRC staff determination granting access to SUNSI whose release would harm that party's interest independent of the proceeding. Such a challenge must be filed within 5 days of the notification by the NRC staff of its grant of access and must be filed with: (a) the presiding officer designated in this proceeding; (b) if no presiding officer has been appointed, the Chief Administrative Judge, or if this individual is unavailable, another administrative judge, or an Administrative Law Judge with jurisdiction pursuant to 10 CFR 2.318(a); or (c) if another officer has been designated to rule on information access issues, with that officer.

If challenges to the NRC staff determinations are filed, these procedures give way to the normal

⁵ Any motion for Protective Order or draft Non-Disclosure Affidavit or Agreement for SUNSI must be filed with the presiding officer or the Chief Administrative Judge if the presiding officer has not yet been designated, within 30 days of the deadline for the receipt of the written access request.

⁶ Any motion for Protective Order or draft Non-Disclosure Agreement or Affidavit for SGI must be filed with the presiding officer or the Chief Administrative Judge if the presiding officer has not yet been designated, within 180 days of the deadline for the receipt of the written access request.

process for litigating disputes concerning access to information. The availability of interlocutory review by the Commission of orders ruling on such NRC staff determinations (whether granting or denying access) is governed by 10 CFR 2.311.⁷

L. The Commission expects that the NRC staff and presiding officers (and any other reviewing officers) will consider and resolve requests for access to SUNSI or SGI, and motions for

protective orders, in a timely fashion in order to minimize any unnecessary delays in identifying those petitioners who have standing and who have propounded contentions meeting the specificity and basis requirements in 10 CFR part 2. The attachment to this Order summarizes the general target schedule for processing and resolving requests under these procedures.

It is so ordered.

Dated: October 3, 2024.

For the Nuclear Regulatory Commission.

Carrie Safford,

Secretary of the Commission.

Attachment 1—General Target Schedule for Processing and Resolving Requests for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information in This Proceeding

Day	Event/activity
0	Publication of Federal Register notice of hearing or opportunity for hearing, including order with instructions for access requests.
10	Deadline for submitting requests for access to Sensitive Unclassified Non-Safeguards Information (SUNSI) and/or Safeguards Information (SGI) with information: (i) supporting the standing of a potential party identified by name and address; (ii) describing the need for the information in order for the potential party to participate meaningfully in an adjudicatory proceeding; (iii) demonstrating that access should be granted (e.g., showing technical competence for access to SGI); and, for SGI, including application fee for fingerprint/background check
60	Deadline for submitting petition for intervention containing: (i) demonstration of standing; and (ii) all contentions whose formulation does not require access to SUNSI and/or SGI (+25 Answers to petition for intervention; +7 petitioner/requestor reply).
20	U.S. Nuclear Regulatory Commission (NRC) staff informs the requestor of the staff's determination whether the request for access provides a reasonable basis to believe standing can be established and shows (1) need for SUNSI or (2) need to know for SGI. (For SUNSI, NRC staff also informs any party to the proceeding whose interest independent of the proceeding would be harmed by the release of the information.) If NRC staff makes the finding of need for SUNSI and likelihood of standing, NRC staff begins document processing (preparation of redactions or review of redacted documents). If NRC staff makes the finding of need to know for SGI and likelihood of standing, NRC staff begins background check (including fingerprinting for a criminal history records check), information processing (preparation of redactions or review of redacted documents), and readiness inspections.
25	If NRC staff finds no "need," no "need to know," or no likelihood of standing, the deadline for requestor/petitioner to file a motion seeking a ruling to reverse the NRC staff's denial of access; NRC staff files copy of access determination with the presiding officer (or Chief Administrative Judge or other designated officer, as appropriate). If NRC staff finds "need" for SUNSI, the deadline for any party to the proceeding whose interest independent of the proceeding would be harmed by the release of the information to file a motion seeking a ruling to reverse the NRC staff's grant of access.
30	Deadline for NRC staff reply to motions to reverse NRC staff determination(s).
40	(Receipt +30) If NRC staff finds standing and need for SUNSI, deadline for NRC staff to complete information processing and file motion for Protective Order and draft Non-Disclosure Agreement or Affidavit. Deadline for applicant/licensee to file Non-Disclosure Agreement or Affidavit for SUNSI.
190	(Receipt +180) If NRC staff finds standing, need to know for SGI, and trustworthiness and reliability, deadline for NRC staff to file motion for Protective Order and draft Non-Disclosure Agreement or Affidavit (or to make a determination that the proposed recipient of SGI is not trustworthy or reliable). Note: Before the Office of Administration makes a final adverse determination regarding access to SGI, the proposed recipient must be provided an opportunity to correct or explain information.
205	Deadline for petitioner to seek reversal of a final adverse NRC staff trustworthiness or reliability determination under 10 CFR 2.336(f)(1)(iv).
A	If access granted: Issuance of a decision by a presiding officer or other designated officer on motion for protective order for access to sensitive information (including schedule for providing access and submission of contentions) or decision reversing a final adverse determination by the NRC staff.
A + 3	Deadline for filing executed Non-Disclosure Agreements or Affidavits. Access provided to SUNSI and/or SGI consistent with decision issuing the protective order.
A + 28	Deadline for submission of contentions whose development depends upon access to SUNSI and/or SGI. However, if more than 25 days remain between the petitioner's receipt of (or access to) the information and the deadline for filing all other contentions (as established in the notice of opportunity to request a hearing and petition for leave to intervene), the petitioner may file its SUNSI or SGI contentions by that later deadline.
A + 53	(Contention receipt +25) Answers to contentions whose development depends upon access to SUNSI and/or SGI.
A + 60	(Answer receipt +7) Petitioner/Intervenor reply to answers.
>A + 60	Decision on contention admission.

[FR Doc. 2024-23264 Filed 10-7-24; 8:45 am]

BILLING CODE 7590-01-P

⁷ Requestors should note that the filing requirements of the NRC's E-Filing Rule (72 FR 49139; August 28, 2007, as amended at 77 FR

46562; August 3, 2012, 78 FR 34247, June 7, 2013) apply to appeals of NRC staff determinations (because they must be served on a presiding officer

or the Commission, as applicable), but not to the initial SUNSI/SGI request submitted to the NRC staff under these procedures.

POSTAL REGULATORY COMMISSION

[Docket Nos. CP2023–190; CP2024–1; CP2024–125; MC2025–3 and K2025–3; MC2025–7 and K2025–7; MC2025–8 and K2025–8; MC2025–9 and K2025–9; MC2025–10 and K2025–10; MC2025–12 and K2025–12; MC2025–13 and K2025–13; MC2025–14 and K2025–14]

New Postal Products

AGENCY: Postal Regulatory Commission.

ACTION: Notice.

SUMMARY: The Commission is noticing a recent Postal Service filing for the Commission's consideration concerning a negotiated service agreement. This notice informs the public of the filing, invites public comment, and takes other administrative steps.

DATES: *Comments are due:* October 10, 2024.

ADDRESSES: Submit comments electronically via the Commission's Filing Online system at <http://www.prc.gov>. Those who cannot submit comments electronically should contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section by telephone for advice on filing alternatives.

FOR FURTHER INFORMATION CONTACT: David A. Trissell, General Counsel, at 202–789–6820.

SUPPLEMENTARY INFORMATION:**Table of Contents**

- I. Introduction
- II. Docketed Proceeding(s)

I. Introduction

Pursuant to 39 CFR 3041.405, the Commission gives notice that the Postal Service filed request(s) for the Commission to consider matters related to negotiated service agreement(s). The request(s) may propose the addition or removal of a negotiated service agreement from the Market Dominant or the Competitive product list, or the modification of an existing product currently appearing on the Market Dominant or the Competitive product list.

Section II identifies the docket number(s) associated with each Postal Service request, the title of each Postal Service request, the request's acceptance date, and the authority cited by the Postal Service for each request. For each request, the Commission appoints an officer of the Commission to represent the interests of the general public in the proceeding, pursuant to 39 U.S.C. 505 (Public Representative). Section II also establishes comment deadline(s) pertaining to each request.

The public portions of the Postal Service's request(s) can be accessed via the Commission's website (<http://www.prc.gov>). Non-public portions of the Postal Service's request(s), if any, can be accessed through compliance with the requirements of 39 CFR 3011.301.¹

The Commission invites comments on whether the Postal Service's request(s) in the captioned docket(s) are consistent with the policies of title 39. For request(s) that the Postal Service states concern Market Dominant product(s), applicable statutory and regulatory requirements include 39 U.S.C. 3622, 39 U.S.C. 3642, 39 CFR part 3030, and 39 CFR part 3040, subpart B. For request(s) that the Postal Service states concern Competitive product(s), applicable statutory and regulatory requirements include 39 U.S.C. 3632, 39 U.S.C. 3633, 39 U.S.C. 3642, 39 CFR part 3035, and 39 CFR part 3040, subpart B. Comment deadline(s) for each request appear in section II.

II. Docketed Proceeding(s)

1. *Docket No(s):* CP2023–190; *Filing Title:* Request of the United States Postal Service Concerning Modification One to Priority Mail Express International, Priority Mail International & First-Class Package International Service Contract 21; *Filing Acceptance Date:* October 1, 2024; *Filing Authority:* 39 CFR 3041.505; *Public Representative:* Katalin K. Clendenin; *Comments Due:* October 10, 2024.

2. *Docket No(s):* CP2024–1; *Filing Title:* USPS Request Concerning Amendment One to Priority Mail & USPS Ground Advantage Contract 69, with Material Filed Under Seal; *Filing Acceptance Date:* September 25, 2024; *Filing Authority:* 39 CFR 3041.505; *Public Representative:* Samuel Robinson; *Comments Due:* October 10, 2024.

3. *Docket No(s):* CP2024–125; *Filing Title:* USPS Request Concerning Amendment One to Priority Mail & USPS Ground Advantage Contract 144, with Material Filed Under Seal; *Filing Acceptance Date:* October 2, 2024; *Filing Authority:* 39 CFR 3041.505; *Public Representative:* Jennaca D. Upperman; *Comments Due:* October 10, 2024.

4. *Docket No(s):* MC2025–3 and K2025–3; *Filing Title:* USPS Request to Add Priority Mail Express International, Priority Mail International & First-Class Package International Service Contract

47 to Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* October 2, 2024; *Filing Authority:* 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative:* Katalin K. Clendenin; *Comments Due:* October 10, 2024.

5. *Docket No(s):* MC2025–7 and K2025–7; *Filing Title:* USPS Request to Add Priority Mail Express, Priority Mail & USPS Ground Advantage Contract 423 to the Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* October 2, 2024; *Filing Authority:* 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative:* Gregory S. Stanton; *Comments Due:* October 10, 2024.

6. *Docket No(s):* MC2025–8 and K2025–8; *Filing Title:* USPS Request to Add Priority Mail Express, Priority Mail & USPS Ground Advantage Contract 424 to the Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* October 2, 2024; *Filing Authority:* 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative:* Kenneth R. Moeller; *Comments Due:* October 10, 2024.

7. *Docket No(s):* MC2025–9 and K2025–9; *Filing Title:* USPS Request to Add Priority Mail Express, Priority Mail & USPS Ground Advantage Contract 425 to the Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* October 2, 2024; *Filing Authority:* 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative:* Jennaca D. Upperman; *Comments Due:* October 10, 2024.

8. *Docket No(s):* MC2025–10 and K2025–10; *Filing Title:* USPS Request to Add Priority Mail Express, Priority Mail & USPS Ground Advantage Contract 426 to the Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* October 2, 2024; *Filing Authority:* 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative:* Christopher C. Mohr; *Comments Due:* October 10, 2024.

9. *Docket No(s):* MC2025–12 and K2025–12; *Filing Title:* USPS Request to Add Priority Mail & USPS Ground Advantage Contract 372 to Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* October 2, 2024; *Filing Authority:* 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative:* Kenneth R. Moeller; *Comments Due:* October 10, 2024.

10. *Docket No(s):* MC2025–13 and K2025–13; *Filing Title:* USPS Request to Add Priority Mail Express, Priority Mail & USPS Ground Advantage Contract 428 to the Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* October 2,

¹ See Docket No. RM2018–3, Order Adopting Final Rules Relating to Non-Public Information, June 27, 2018, Attachment A at 19–22 (Order No. 4679).

2024; *Filing Authority*: 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative*: Gregory S. Stanton; *Comments Due*: October 10, 2024.

11. *Docket No(s)*: MC2025–14 and K2025–14; *Filing Title*: USPS Request to Add Priority Mail Express, Priority Mail & USPS Ground Advantage Contract 429 to the Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date*: October 2, 2024; *Filing Authority*: 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative*: Jana Slovinska; *Comments Due*: October 10, 2024.

This Notice will be published in the **Federal Register**.

Erica A. Barker,
Secretary.

[FR Doc. 2024–23251 Filed 10–7–24; 8:45 am]

BILLING CODE 7710–FW–P

POSTAL REGULATORY COMMISSION

[*Docket Nos.* MC2025–1 and K2025–1; MC2025–2 and K2025–2; MC2025–4 and K2025–4; MC2025–5 and K2025–5; MC2025–6 and K2025–6]

New Postal Products

AGENCY: Postal Regulatory Commission.

ACTION: Notice.

SUMMARY: The Commission is noticing a recent Postal Service filing for the Commission’s consideration concerning a negotiated service agreement. This notice informs the public of the filing, invites public comment, and takes other administrative steps.

DATES: *Comments are due*: October 9, 2024.

ADDRESSES: Submit comments electronically via the Commission’s Filing Online system at <http://www.prc.gov>. Those who cannot submit comments electronically should contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section by telephone for advice on filing alternatives.

FOR FURTHER INFORMATION CONTACT: David A. Trissell, General Counsel, at 202–789–6820.

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removal of a negotiated service agreement from the Market Dominant or the Competitive product list, or the modification of an existing product currently appearing on the Market Dominant or the Competitive product list.

Section II identifies the docket number(s) associated with each Postal Service request, the title of each Postal Service request, the request’s acceptance date, and the authority cited by the Postal Service for each request. For each request, the Commission appoints an officer of the Commission to represent the interests of the general public in the proceeding, pursuant to 39 U.S.C. 505 (Public Representative). Section II also establishes comment deadline(s) pertaining to each request.

The public portions of the Postal Service’s request(s) can be accessed via the Commission’s website (<http://www.prc.gov>). Non-public portions of the Postal Service’s request(s), if any, can be accessed through compliance with the requirements of 39 CFR 3011.301.¹

The Commission invites comments on whether the Postal Service’s request(s) in the captioned docket(s) are consistent with the policies of title 39. For request(s) that the Postal Service states concern Market Dominant product(s), applicable statutory and regulatory requirements include 39 U.S.C. 3622, 39 U.S.C. 3642, 39 CFR part 3030, and 39 CFR part 3040, subpart B. For request(s) that the Postal Service states concern Competitive product(s), applicable statutory and regulatory requirements include 39 U.S.C. 3632, 39 U.S.C. 3633, 39 U.S.C. 3642, 39 CFR part 3035, and 39 CFR part 3040, subpart B. Comment deadline(s) for each request appear in section II.

II. Docketed Proceeding(s)

1. *Docket No(s)*: MC2025–1 and K2025–1; *Filing Title*: USPS Request to Add Priority Mail Express, Priority Mail & USPS Ground Advantage Contract 421 to the Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date*: October 1, 2024; *Filing Authority*: 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative*: Jana Slovinska; *Comments Due*: October 9, 2024.

2. *Docket No(s)*: MC2025–2 and K2025–2; *Filing Title*: USPS Request to Add Priority Mail Express, Priority Mail & USPS Ground Advantage Contract 422 to the Competitive Product List and

¹ See Docket No. RM2018–3, Order Adopting Final Rules Relating to Non-Public Information, June 27, 2018, Attachment A at 19–22 (Order No. 4679).

Notice of Filing Materials Under Seal; *Filing Acceptance Date*: October 1, 2024; *Filing Authority*: 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative*: Jana Slovinska; *Comments Due*: October 9, 2024.

3. *Docket No(s)*: MC2025–4 and K2025–4; *Filing Title*: USPS Request to Add Priority Mail & USPS Ground Advantage Contract 369 to Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date*: October 1, 2024; *Filing Authority*: 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative*: Jennaca D. Upperman; *Comments Due*: October 9, 2024.

4. *Docket No(s)*: MC2025–5 and K2025–5; *Filing Title*: USPS Request to Add Priority Mail & USPS Ground Advantage Contract 370 to Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date*: October 1, 2024; *Filing Authority*: 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative*: Katalin K. Clendenin; *Comments Due*: October 9, 2024.

5. *Docket No(s)*: MC2025–6 and K2025–6; *Filing Title*: USPS Request to Add Priority Mail & USPS Ground Advantage Contract 371 to Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date*: October 1, 2024; *Filing Authority*: 39 U.S.C. 3642, 39 CFR 3035.105, and 3041.310; *Public Representative*: Katalin K. Clendenin; *Comments Due*: October 9, 2024.

This Notice will be published in the **Federal Register**.

Erica A. Barker,
Secretary.

[FR Doc. 2024–23157 Filed 10–7–24; 8:45 am]

BILLING CODE 7710–FW–P

SECURITIES AND EXCHANGE COMMISSION

[Investment Company Act Release No.35348; File No. 812–15507]

FS Credit Opportunities Corp., et al.

October 3, 2024.

AGENCY: Securities and Exchange Commission (“Commission” or “SEC”).
ACTION: Notice.

Notice of application for an order under sections 17(d) and 57(i) of the Investment Company Act of 1940 (the “Act”) and rule 17d–1 under the Act to permit certain joint transactions otherwise prohibited by sections 17(d) and 57(a)(4) of the Act and rule 17d–1 under the Act.

Summary of Application: Applicants request an order to permit certain business development companies and closed-end management investment companies to co-invest in portfolio companies with each other and with certain affiliated investment entities.

Applicants: FS Credit Opportunities Corp., PA Senior Credit Opportunities Fund, L.P., FS Senior Credit Fund II, L.P., FS Global Advisor, LLC, FS Specialty Lending Fund, FS/EIG ADVISOR, LLC, FS Tactical Opportunities (LOI) Splitter, L.P., FS Tactical Opportunities (SI) Splitter, L.P., FS Tactical Opportunities (LOI) Splitter II, L.P., FS Tactical Opportunities (SI) Splitter II, L.P. and FS Tactical Advisor, LLC.

Filing Dates: The application was filed on September 19, 2023, and amended on January 24, 2024, May 23, 2024 and September 18, 2024.

Hearing or Notification of Hearing: An order granting the requested relief will be issued unless the Commission orders a hearing. Interested persons may request a hearing on any application by emailing the SEC's Secretary at Secretaries-Office@sec.gov and serving the Applicants with a copy of the request by email, if an email address is listed for the relevant Applicant below, or personally or by mail, if a physical address is listed for the relevant Applicant below.

Hearing requests should be received by the Commission by 5:30 p.m. on October 28, 2024, and should be accompanied by proof of service on applicants, in the form of an affidavit or, for lawyers, a certificate of service. Pursuant to rule 0–5 under the Act, hearing requests should state the nature of the writer's interest, any facts bearing upon the desirability of a hearing on the matter, the reason for the request, and the issues contested. Persons who wish to be notified of a hearing may request notification by emailing the Commission's Secretary at Secretaries-Office@sec.gov.

ADDRESSES: The Commission: Secretaries-Office@sec.gov. Applicants: Stephen S. Sypherd, 201 Rouse Boulevard, Philadelphia, Pennsylvania 19112; James A. Lebovitz, Jonathan H. Gaines, David Bartels, Cira Centre, 2929 Arch Street, Philadelphia, PA 19104.

FOR FURTHER INFORMATION CONTACT: Deepak T. Pai, Senior Counsel, or Thomas Ahmadifar, Branch Chief, at (202) 551–6825 (Division of Investment Management, Chief Counsel's Office).

SUPPLEMENTARY INFORMATION: For Applicants' representations, legal analysis, and conditions, please refer to Applicants' third amended and restated

application, dated September 18, 2024, which may be obtained via the Commission's website by searching for the file number at the top of this document, or for an Applicant using the Company name search field, on the SEC's EDGAR system.

The SEC's EDGAR system may be searched at, at <http://www.sec.gov/edgar/searchedgar/legacy/companysearch.html>. You may also call the SEC's Public Reference Room at (202) 551–8090.

For the Commission, by the Division of Investment Management, under delegated authority.

Vanessa A. Countryman,
Secretary.

[FR Doc. 2024–23218 Filed 10–7–24; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–101226; File No. SR–LTSE–2024–06]

Self-Regulatory Organizations; Long-Term Stock Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Adopt Initial Fees and Rebates Applicable to Members of the Exchange Pursuant to Exchange Rule 15.110 and Adopt a Policy Relating to Billing Errors

October 1, 2024.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),¹ and Rule 19b–4 thereunder,² notice is hereby given that on September 19, 2024, Long-Term Stock Exchange, Inc. (“LTSE” or the “Exchange”) filed with the Securities and Exchange Commission (the “Commission”) the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange is filing with the Securities and Exchange Commission (“Commission”) a proposed rule change to adopt the initial fees and rebates applicable to Members of the Exchange pursuant to Exchange Rule 15.110 (Authority to Prescribe Dues, Fees, Assessments and Other Charges) and adopt a policy relating to billing errors.

The Exchange proposes to implement the rule change effective immediately upon commencement of its transition to a new trading platform.

The text of the proposed rule change is available at the Exchange's website at <https://longtermstockexchange.com/>, at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement on the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to adopt a fee schedule (the “Fee Schedule”) applicable to the use of the Exchange. Additionally, the Exchange proposes to amend Rule 15.120 (Collection of Exchange Fees and Other Claims and Billing Policy), as well as moving the entirety of the text in Rule 15.200 (Schedule of Fees) to the new Fee Schedule. These changes are part of a larger initiative where the Exchange intends to transition to a new trading platform. The go-live date for this transition is September 23, 2024 and thus, proposed fees and changes will be effective as of the date of such transition.³

The Exchange first notes that it operates in a highly competitive market in which market participants can readily direct order flow to competing venues if they deem fee levels at a particular venue to be excessive or incentives to be insufficient. More specifically, the Exchange will be only one of numerous equities venues to which market participants may direct their order flow. Based on publicly available information, no single registered equities exchange currently has more than approximately 16% of

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b–4.

³ *Id.*

total market share.⁴ Thus, in such a low-concentrated and highly competitive market, no single equities exchange possesses significant pricing power in the execution of order flow and the Exchange currently represents a small percentage of the overall market.

Transaction Fees

Below is a description of the fees and rebates that the Exchange intends to impose under the initial proposed Fee Schedule, which will be applicable to transactions executed in all trading sessions. Under the proposed Fee Schedule, the Exchange will operate a “Maker-Taker” model whereby it provides rebates to Members that provide liquidity and charges fees to those that remove liquidity, as further described below. The Exchange does not initially propose to assess volume-based fees or rebates. Accordingly, all fees and rebates described below are applicable to all Members, regardless of the overall volume of a Member’s trading activities on the Exchange.

The Exchange proposes to adopt a pricing strategy that incentivizes adding displayed liquidity on the Exchange in order to encourage and facilitate price discovery and price formation, which the Exchange believes benefits all Members and investors. Details of this pricing strategy are laid out below:

(A) Standard Fee for Removing Liquidity

The Exchange proposes a fee of \$0.0030 per share for executions of orders that remove liquidity from the LTSE Order Book⁵ (“Remove Liquidity”) in securities priced at or above \$1.00 per share or 0.30% of the total dollar value (“TDV”) for securities priced under \$1.00.⁶

(B) Standard Rebate for Adding Displayed Liquidity

The Exchange proposes to provide a rebate of \$0.0028 per share for executions of orders that: (i) are displayed on the LTSE Order Book and (ii) add liquidity to the Exchange (“Added Displayed Liquidity”), in all securities traded on the Exchange priced at or above \$1.00 per share or 0.28% of

the TDV for securities priced under \$1.00.⁷ The proposed rebate for Added Displayed Liquidity would apply to the Reserve Quantity⁸ of an order such that any replenishment amount of the Reserve Quantity of an order that is executed against would be treated as Added Displayed Liquidity even though such portion of the order was not displayed on the LTSE Order Book prior to the order being replenished in accordance with the Member’s instructions and the Exchange’s rules. The entire portion of the Reserve Quantity of an order would be eligible for this rebate, however, a Member would only receive such rebate for any portion(s) of the Reserve Quantity that is (are) executed against it. The proposed Fee Schedule will detail the treatment of the Reserve Quantity.

(C) Rebates for Adding Displayed Liquidity That Matches the National Best Bid or Offer (“NBBO”)⁹

The Exchange proposes to provide a rebate of \$0.0029 per share for executions of Added Displayed Liquidity that establishes a new best bid or offer on the Exchange that matches the NBBO first established on an away market (“NBBO Joiner”) in all securities traded on the Exchange priced at or above \$1.00 per share or 0.29% of the TDV for securities priced under \$1.00.¹⁰ The proposed Fee Schedule will include this definition of NBBO Joiner.

(D) Rebates for Adding Displayed Liquidity That Establishes the NBBO

The Exchange proposes to provide a rebate of \$0.00295 per share for executions of Added Displayed Liquidity that establishes the NBBO (“NBBO Setter”) on LTSE in all securities traded on the Exchange priced at or above \$1.00 per share or 0.295% of the TDV for securities priced under \$1.00.¹¹ The proposed Fee Schedule will include this definition of NBBO Setter.

(E) Standard Rebate for Adding Non-Displayed Liquidity

The Exchange proposes to provide a standard rebate of \$0.0014 per share for executions of orders that: (i) are not displayed on the LTSE Order Book and (ii) add liquidity to the Exchange, in all securities traded on the Exchange priced at or above \$1.00 per share or 0.14% of the TDV for securities priced under \$1.00.¹²

Other Proposed Changes

Annual Membership Fee

The Exchange currently sets forth its Annual Membership Fee of \$10,000 a year in Rule 15.200. The Exchange is proposing to remove this section of the rulebook and move the Annual Membership Fee to the newly created Section (A) of the Fee Schedule so that Members can have all specific fees assessed by the Exchange in one place. The Exchange is not proposing any changes to the Annual Membership Fee except to remove subsection (4) which details how the Exchange assessed the Annual Membership Fee the year it launched operations. Since this subsection is no longer applicable the Exchange believes it is appropriate to remove it altogether instead of inserting it into the proposed Fee Schedule.

Billing Errors

Additionally, the Exchange is proposing to adopt a policy relating to billing errors. Specifically, the Exchange proposes to adopt a new paragraph (c) in Rule 15.120 which would provide that all fees and rebates assessed prior to the three full calendar months before the month in which the Exchange becomes aware of a billing error shall be considered final.¹³ To clarify the new Billing Errors section, the Exchange is also proposing to add the title “Pricing Disputes” to Rule 15.120(b). The Exchange would apply the three month look back regardless of whether the error was discovered by the Exchange or by a Member or Non-Member that submitted a pricing dispute.¹⁴

⁷ The pricing is referred to by the Exchange as “Add displayed liquidity” on the proposed Fee Schedule.

⁸ “Reserve Quantity” refers to the portion of an order that includes a Non-Displayed instruction in which a portion of that order is also displayed on the LTSE Order Book. Both the portion of the order with a Displayed instruction and the Reserve Quantity are available for execution against incoming orders. See Exchange Rule 11.180(k).

⁹ “NBBO” is defined in LTSE Rule 11.410(b).

¹⁰ The pricing is referred to by the Exchange as “Add displayed liquidity—NBBO Joiner” on the proposed Fee Schedule.

¹¹ The pricing is referred to by the Exchange as “Add displayed liquidity—NBBO Setter” on the proposed Fee Schedule.

¹² This pricing is referred to by the Exchange “Add non-displayed liquidity” on the proposed Fee Schedule to represent the execution of an order that adds non-displayed liquidity.

¹³ The Exchange notes that the current policy in Rule 15.120(b), which states that all pricing disputes must be submitted no later than sixty (60) days after receipt of a billing invoice, will remain in place.

¹⁴ For example, if the Exchange becomes aware of a transaction fee billing error on September 4, 2024, the Exchange will resolve the error by crediting or debiting Members or Non-Members based on the fees or rebates that should have been applied to any impacted transactions during June, July and August 2024. The Exchange notes that because it bills in arrears, the Exchange would be able to correct the

⁴ Market share percentage calculated as of September 4, 2024. The Exchange receives and processes data made available through consolidated data feeds (*i.e.*, CTS and UTDF).

⁵ “LTSE Order Book” means the System’s electronic file of orders. See Exchange Rule 1.160(t). The “System” shall mean the electronic communications and trading facility designated by the Board through which securities orders of Members are consolidated for ranking and execution. See Exchange Rule 1.160(rr).

⁶ This pricing is referred to as “Remove liquidity” on the proposed Fee Schedule.

The purpose of the proposed change is to provide both the Exchange and its Members and Non-Members finality with respect to fees and rebates previously assessed by the Exchange and the ability to close their books after a specified period of time. The Exchange notes that Rule 15.120(b) already requires that pricing disputes must be submitted to the Exchange in writing and accompanied by supporting documentation no later than 60 days after receipt of a billing invoice, which is designed to encourage prompt review of Exchange invoices so that any pricing disputes can be addressed in a timely manner. The Exchange believes the proposed change would further the goal of addressing billing discrepancies in a timely manner while the information and data underlying those charges (*e.g.*, applicable fees and order information) is still easily and readily available, without further limiting the timeframe in which a pricing dispute may be submitted. This practice would avoid issues that may arise when billing errors are discovered long after they occurred and the parties have already prepared, and in some cases published, their books, and would conserve Exchange resources that would have to be expended to resolve untimely billing disputes. As such, the proposed rule change would alleviate administrative burdens related to prior billing errors, which could divert Exchange staff resources away from the Exchange's regulatory and business purposes.

The Exchange notes that the language of proposed Rule 15.120(c) is the same as language in MEMX Rule 15.3(c)¹⁵ and is also included in the fee schedules of the four Cboe U.S. equities exchanges—Cboe BZX Exchange, Inc. (“Cboe BZX”),¹⁶ Cboe BYX Exchange, Inc. (“Cboe BYX”),¹⁷ Cboe EDGA Exchange, Inc. (“Cboe EDGA”),¹⁸ and

Cboe EDGX Exchange, Inc. (“Cboe EDGX”).¹⁹ The Exchange also notes that a number of other exchanges have explicitly stated that they consider all fees to be final after a similar period of time.²⁰ The proposed billing errors policy would apply to all fees and rebates assessed by the Exchange.

Other Changes

The Exchange proposes to add a section to the proposed Fee Schedule entitled “Additional Fees” and state that Chapter 15 of the LTSE Rule contains other dues, fees, and assessments as well as the collection of Exchange fees for completeness. Further, the Exchange proposes to add a corresponding reference in Supplementary Material .02 of Chapter 15 to state that the LTSE Fee Schedule details fees and rebates assessed by the Exchange.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the provisions of Section 6(b)²¹ of the Act in general, and furthers the objectives of Sections 6(b)(4)²² of the Act, in particular, in that it is designed to provide for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities. Additionally, the Exchange believes that the proposed fees and rebates are consistent with the objectives of Section 6(b)(5)²³ of the Act in that they are designed to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to a free and open market and national market system, and, in general, to protect investors and the public interest, and, particularly, are not designed to permit unfair

discrimination between customers, issuers, brokers, or dealers.

The Exchange operates in a highly competitive market in which market participants can readily direct order flow to competing venues if they deem fee levels at a particular venue to be excessive or incentives to be insufficient. The Exchange believes that the proposed Fee Schedule reflects a simple and competitive pricing structure designed to incentivize market participants to add aggressively priced displayed liquidity and direct their order flow to the Exchange, which the Exchange believes would promote price discovery and price formation and deepen liquidity that is subject to the Exchange's transparency, regulation, and oversight as an exchange, thereby enhancing market quality to the benefit of all Members and investors.

The Commission and the courts have repeatedly expressed their preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. In Regulation NMS, while adopting a series of steps to improve the current market model, the Commission highlighted the importance of market forces in determining prices and SRO revenues and, also, recognized that current regulation of the market system “has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies.”²⁴

Transactions Fees

The Exchange believes that charging a fee to the liquidity remover, and providing a rebate to the liquidity adder, is reasonable, equitable and not unfairly discriminatory because it incentivizes liquidity provision on the Exchange. The Exchange also notes that several other exchanges charge fees for removing liquidity and provide rebates for adding liquidity, and that this aspect of the Exchange's proposed Fee Schedule does not raise any new or novel issues that have not previously been considered by the Commission in connection with the fees and rebates of other exchanges.²⁵ The Exchange notes that unlike other exchanges, LTSE is not proposing any volume based tiers or rebates and rather is proposing a simple flat fee for each of the categories listed below.

The Exchange also believes that it is reasonable, equitable and not unfairly

error in advance of issuing the June [sic] 2024 invoice and therefore, transactions impacted after the end of the last full calendar month through the date of discovery (in this example, between August 31, 2024 and September 4, 2024) and thereafter, would be billed correctly.

¹⁵ See Securities Exchange Act Release No. 34–93381 (October 19, 2021), 86 FR 58972 (October 25, 2021) (SR–MEMX–2021–12).

¹⁶ See Cboe BZX equities trading fee schedule on its public website (available at https://www.cboe.com/us/equities/membership/fee_schedule/bzx/). See also Securities Exchange Act Release No. 90897 (January 11, 2021), 86 FR 4161 (January 15, 2021) (SR–CboeBZX–2020–094).

¹⁷ See Cboe BYX equities trading fee schedule on its public website (available at https://www.cboe.com/us/equities/membership/fee_schedule/byx/). See also Securities Exchange Act Release No. 90899 (January 11, 2021), 86 FR 4156 (January 15, 2021) (SR–CboeBYX–2020–034).

¹⁸ See Cboe EDGA equities trading fee schedule on its public website (available at https://www.cboe.com/us/equities/membership/fee_schedule/edga/).

schedule/edga/). See also Securities Exchange Act Release No. 90897 (January 11, 2021), 86 FR 4161 (January 15, 2021) (SR–CboeBZX–2020–094).

¹⁹ See Cboe EDGX equities trading fee schedule on its public website (available at https://www.cboe.com/us/equities/membership/fee_schedule/edgx/). See also Securities Exchange Act Release No. 90901 (January 11, 2021), 86 FR 4137 (January 15, 2021) (SR–CboeEDGX–2020–064).

²⁰ See, *e.g.*, Securities Exchange Act Release No. 34–91836 (May 11, 2021), 86 FR 26765 (May 17, 2021) (SR–BOX–2021–08); Securities Exchange Act Release No. 87650 (December 3, 2019), 84 FR 67304 (December 9, 2019) (SR–NYSECHX–2019–024); Securities Exchange Act Release No. 84430 (October 16, 2018), 83 FR 53347 (October 22, 2018) (SR–NYSENAT–2018–23); and Securities Exchange Act Release No. 79060 (October 6, 2016), 81 FR 70716 (October 13, 2016) (SR–ISEGemini–2016–11).

²¹ 15 U.S.C. 78f.

²² 15 U.S.C. 78f(b)(4).

²³ 15 U.S.C. 78f(b)(5).

²⁴ See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) (“Regulation NMS Adopting Release”).

²⁵ See *e.g.*, MEMX Equities Fee Schedule, Transaction Fees; MIA Pearl Equities Exchange Fee Schedule and Cboe EDGX Fee Schedule.

discriminatory to provide a higher rebate for executions resulting from adding displayed liquidity than for executions of adding non-displayed liquidity as this rebate structure is designed to incentivize Members to send the Exchange displayable orders, thereby contributing to price discovery and price formation, consistent with the overall goal of enhancing market quality. Moreover, the Exchange notes that there are precedents for exchanges to provide rebates that distinguish between displayed and non-displayed volume to incentivize displayed orders and facilitate price discovery.

Standard Fee for Removing Liquidity

The Exchange believes that it is appropriate, reasonable, and consistent with the Act to charge a standard fee of \$0.0030 per share for executions of orders that remove liquidity from the LTSE Order Book in securities priced at or above \$1.00 per share or 0.30% of the TDV for securities priced under \$1.00 because it is comparable to the transaction fee charged by other exchanges to remove liquidity.²⁶ The Exchange further believes that this fee is equitably allocated and not unfairly discriminatory because it applies equally to all Members and, when coupled with higher rebates for adding displayed liquidity, as described below, is designed to facilitate increased activity on the Exchange to the benefit of all Members by providing more trading opportunities and promoting price discovery.

Standard Rebate for Adding Displayed Liquidity

The Exchange believes that it is appropriate, reasonable, and consistent with the Act to provide a standard rebate of \$0.0028 per share for executions of orders that: (i) are displayed on the LTSE Order Book and (ii) add liquidity to the Exchange, in all securities traded on the Exchange priced at or above \$1.00 per share or 0.28% of the TDV for securities priced under \$1.00 because this rebate is consistent with transaction rebates provided by other exchanges.²⁷ The Exchange

further believes that this rebate structure is equitably allocated and not unfairly discriminatory because it applies equally to all Members.

Rebates for Adding Displayed Liquidity That Matches the NBBO

The Exchange believes that it is appropriate, reasonable, and consistent with the Act to provide a standard rebate of \$0.0029 per share for executions of Added Displayed Liquidity that matches the NBBO in all securities traded on the Exchange priced at or above \$1.00 per share or 0.29% of the TDV for securities priced under \$1.00 because this rebate is consistent with transaction rebates provided by other exchanges.²⁸ The Exchange further believes that this rebate structure is equitably allocated and not unfairly discriminatory because it applies equally to all Members. Lastly, the Exchange believes that providing a higher rebate for adding displayed liquidity that matches the NBBO is reasonable, equitable and not unfairly discriminatory as it designed to encourage the submission of well priced orders, thereby contributing to a deeper and more robust and well-balanced market ecosystem on the Exchange to the benefit of all Members and market participants.

Rebates for Adding Displayed Liquidity That Establishes the NBBO

The Exchange believes that it is appropriate, reasonable, and consistent with the Act to provide a standard rebate of \$0.00295 per share for executions of Added Displayed Liquidity that establishes the NBBO on LTSE in all securities traded on the Exchange priced at or above \$1.00 per share or 0.295% of the TDV for securities priced under \$1.00 because this rebate is consistent with transaction rebates provided by other exchanges.²⁹ The Exchange further believes that this rebate structure is equitably allocated and not unfairly discriminatory because

liquidity of \$0.0016 for executions in securities priced at or above \$1.00, with no rebate for executions in securities priced below \$1.00. Further, various tiers provide the ability of a firm to receive a rebate of \$0.0032 per share; see <https://www.cboe.com/us/equities/membership/fee-schedule/bzx/>. The MEMX Fee Schedule reflects rebates for "adding" displayed liquidity that range from \$0.0015 to \$0.0037 for shares executed at or above \$1.00, with 0.075% to 0.15% of total dollar value for shares executed below \$1.00, see <https://info.memxtrading.com/equities-trading-resources/us-equities-fee-schedule/>.

²⁸ Id.

²⁹ Id. The Exchange notes that MEMX does not have a standalone per share rebate for setting the NBBO, however MEMX offers an additive per share rebate of up to \$0.0002 "NBBO Setter Tier" for securities at or above \$1.00 based on the Member's average daily adding volume.

it applies equally to all Members. Lastly, the Exchange believes that providing a higher rebate for adding displayed liquidity that establishes the NBBO is reasonable, equitable and not unfairly discriminatory as it designed to encourage the submission of well priced orders, thereby contributing to a deeper and more robust and well-balanced market ecosystem on the Exchange to the benefit of all Members and market participants.

Standard Rebate for Adding Non-Displayed Liquidity

The Exchange believes that it is appropriate, reasonable, and consistent with the Act to provide a standard rebate of \$0.0014 per share for executions of orders that: (i) are not displayed on the LTSE Order Book and (ii) add liquidity to the Exchange, in all securities traded on the Exchange priced at or above \$1.00 per share or 0.14% of the TDV for securities priced under \$1.00 because this rebate is consistent with transaction rebates provided by other exchanges.³⁰ The Exchange further believes that this rebate structure is equitably allocated and not unfairly discriminatory because it applies equally to all Members.

Other Proposed Changes

Annual Membership Fee

The Exchange believes moving the Annual Membership Fee language to the proposed Fee Schedule is reasonable, equitable and not unfairly discriminatory. In particular, the Exchange believes that the proposed rule change will provide greater clarity to Members by having the Membership Fee in the Fee Schedule. Lastly, removing subsection (4) is appropriate as it is an obsolete reference which only applied during the Exchange's first year of operations. This proposed change does not propose any substantive changes to the Membership Fees the Exchange charges. Therefore, the Exchange does not believe that the proposed change raises any new or novel issues not already considered by the Commission.

³⁰ For example, the Cboe BZX Fee Schedule reflects a standard rebate for adding liquidity of \$0.00080 for executions in securities priced at or above \$1.00, with no rebate for executions in securities priced below \$1.00. Further, various tiers provide the ability of a firm to receive a rebate of \$0.0032 per share; see <https://www.cboe.com/us/equities/membership/fee-schedule/bzx/>. The MEMX Fee Schedule reflects rebates for adding non-displayed liquidity that range from \$0.0008 to \$0.028 for shares executed at or above \$1.00, with 0.075% for shares executed below a \$1.00, see <https://info.memxtrading.com/equities-trading-resources/us-equities-fee-schedule/>.

²⁶ For example, the MEMX Fee Schedule assesses fees to remove liquidity for securities at or above \$1.00 that range from \$0.0029–\$0.0030 per share (fees for securities below \$1.00 the fees range from 0.28%–0.30% of total dollar value); see <https://info.memxtrading.com/equities-trading-resources/us-equities-fee-schedule/>. The Cboe BZX Fee Schedule has standard fees for "removing" liquidity of \$0.0030 for shares executed at or above \$1.00 or 0.30% of total dollar volume for shares executed below \$1.00; see <https://www.cboe.com/us/equities/membership/fee-schedule/bzx/>.

²⁷ For example, the Cboe BZX Fee Schedule reflects a standard rebate for adding displayed

Billing Errors

With respect to the proposed policy relating to billing errors, the Exchange believes that providing that all fees and rebates are final after three months (*i.e.*, resolving billing errors only for the three full calendar months preceding the month in which the Exchange became aware of the error) is reasonable and consistent with the Act as both the Exchange and its Members and Non-Members have an interest in knowing when its fee assessments are final and when reliance can be placed on those assessments. Indeed, without some deadline on billing errors, the Exchange and its Members and Non-Members would never be able to close their books with any confidence. As noted above, the Exchange believes this proposed change would conserve Exchange resources that would have to be expended to resolve untimely billing disputes, which could divert Exchange staff resources away from the Exchange's regulatory and business purposes. For these reasons, the Exchange believes this proposed change promotes just and equitable principles of trade, fosters cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, removes impediments to and perfects the mechanism of a free and open market and a national market system, and, in general, protects investors and the public interest.

Furthermore, as noted above, the language of proposed Rule 15.120(c) is the same as language included in MEMX Rule 15.3(c) and the fee schedules of the four Cboe U.S. equities exchanges,³¹ and a number of other exchanges similarly consider their fees final after a similar period of time.³² As such, this proposed change does not raise any new or novel issues that have not been previously considered by the Commission. This proposed change is also equitable and not unfairly discriminatory because it would apply equally to all Members (and Non-Members that pay Exchange fees) and would apply in cases where either the Member (or Non-Member) discovers the error or the Exchange discovers the error.

Additional Changes

Lastly, the Exchange believes the additional changes are reasonable, equitable and not unfairly discriminatory. In particular, the Exchange believes that the proposed

changes will provide greater clarity to market participants when looking at either the Fee Schedule or Chapter 15 of the LTSE Rulebook. This proposed change does not propose any substantive changes fees [sic] charged by the Exchange.. Therefore, the Exchange does not believe that the proposed change raises any new or novel issues not already considered by the Commission.

In conclusion, the Exchange also submits that its proposed fee structure satisfies the requirements of Sections 6(b)(4) and 6(b)(5) of the Act for the reasons discussed above in that it provides for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities, provides certainty in billing and a process for resolving billing disputes, does not permit unfair discrimination between customers, issuers, brokers, or dealers, and is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system and in general to protect investors and the public interest, particularly as the proposal neither targets nor will it have a disparate impact on any particular category of market participant. As described more fully below in the Exchange's statement regarding the burden on competition, the Exchange believes that it is subject to significant competitive forces, and that its proposed fee and rebate structure is an appropriate effort to address such forces.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. Rather, as discussed above, the Exchange believes that the proposed change would encourage the submission of additional order flow to a public exchange, thereby promoting market depth, execution incentives and enhanced execution opportunities, as well as price discovery and transparency for all Members. As a result, the Exchange believes that the proposed change furthers the Commission's goal in adopting Regulation NMS of fostering competition among orders, which promotes "more efficient pricing of individual stocks for all types of orders, large and small."³³ The Exchange does not believe that the proposed rule

change will impose any burden on intermarket competition that is not necessary or appropriate in furtherance of the purposes of the Act. To the contrary, the Exchange believes that the proposed pricing structure will increase competition and is intended to draw volume to the Exchange. The Exchange believes that the ever-shifting market share among the exchanges from month to month demonstrates that market participants can shift order flow or discontinue to reduce use of certain categories of products, in response to new or different pricing structures being introduced into the market. Accordingly, competitive forces constrain the Exchange's transaction fees and rebates, and market participants can readily trade on competing venues if they deem pricing levels at those other venues to be more favorable. Although this pricing is intended to attract liquidity to the Exchange, most other exchanges in operation today already offer multiple incentives to their participants, including tiered pricing that provides higher rebates or discounted executions, and other exchanges will be able to modify such incentives in order to compete with the Exchange. Accordingly, with respect to a participant deciding to either submit an order to add liquidity or seeking to remove liquidity, there are multiple exchanges that will continue to be competitively priced for such orders when compared to the Exchange's pricing. Further, while pricing incentives can cause shifts of liquidity between trading centers, market participants make determinations on where to provide liquidity or route orders to take liquidity based on factors other than pricing, including execution quality, technology, functionality, and other considerations. Consequently, the Exchange believes that the degree to which its fees and rebates could impose any burden on competition is extremely limited, and does not believe that such fees would burden competition of Members or competing venues in a manner that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange does not believe that the proposed rule change will impose any burden on intramarket competition that is not necessary or appropriate in furtherance of the purposes of the Act because the proposed fees and rebates apply equally to all Members. The proposed pricing structure is intended to encourage market participants to add displayed and non-displayed liquidity to the Exchange by providing rebates that are

³¹ See *supra* notes 17–21 [sic].

³² See *supra* note 22 [sic].

³³ See *supra* note 26 [sic].

comparable to those offered by other exchanges as well as to provide a competitive rate charged for removing liquidity, which the Exchange believes will help to encourage Members to send orders to the Exchange to the benefit of all Exchange participants. As the proposed rates are equally applicable to all market participants, the Exchange does not believe there is any burden on intramarket competition.

With respect to the proposed billing errors policy, the proposal would establish a clearly defined timeframe for fees and rebates to be considered final that would apply equally to all Members and Non-Members. Additionally, as noted above, this proposed change is similar to rules of other exchanges and therefore does not raise any new or novel issues that have not been previously considered by the Commission.³⁴

For these reasons, the Exchange does not believe such proposed changes would impair the ability of Members or competing order execution venues to maintain their competitive standing in the financial markets, and therefore, the Exchange does not believe the proposal will impose any burden on intermarket competition. Moreover, because the proposed changes would apply equally to all Members and Non-Members, as applicable, the Exchange does not believe the proposal would impose any burden on intramarket competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange neither solicited nor received comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

This proposed rule change establishes dues, fees or other charges among its members and, as such, may take effect upon filing with the Commission pursuant to Section 19(b)(3)(A)(ii) of the Act³⁵ and paragraph (f)(2) of Rule 19b-4 thereunder.³⁶ Accordingly, the proposed rule change would take effect upon filing with the Commission.

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend the rule change if it appears to the Commission that the action is necessary or appropriate in the public interest, for the protection of

investors, or would otherwise further the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (<https://www.sec.gov/rules/sro.shtml>); or
- Send an email to rule-comments@sec.gov. Please include file number SR-LTSE-2024-06 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090.

All submissions should refer to file number SR-LTSE-2024-06. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (<https://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR-LTSE-2024-06 and should be

submitted on or before October 29, 2024.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.³⁷

Vanessa A. Countryman,
Secretary.

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-101229; File No. SR-CBOE-2024-042]

Self-Regulatory Organizations; Cboe Exchange, Inc.; Notice of Filing of a Proposed Rule Change To Amend Its Rules To Permit Orders Comprised of Options and Futures Legs ("Future-Option Orders")

October 1, 2024.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"),¹ and Rule 19b-4 thereunder,² notice is hereby given that on September 17, 2024, Cboe Exchange, Inc. (the "Exchange" or "Cboe Options") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Cboe Exchange, Inc. (the "Exchange" or "Cboe Options") proposes to amend its Rules to permit orders comprised of options and futures legs ("future-option orders"). The text of the proposed rule change is provided in Exhibit 5.

The text of the proposed rule change is also available on the Exchange's website (<http://www.cboe.com/AboutCBOE/CBOELegalRegulatoryHome.aspx>), at the Exchange's Office of the Secretary, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for

³⁴ See *supra* notes 14-19 [sic].

³⁵ 15 U.S.C. 78s(b)(3)(A)(ii).

³⁶ 17 CFR 240.19b-4(f)(2).

³⁷ 17 CFR 200.30-3(a)(12).

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend its Rules to permit future-option orders, which would be comprised of both options and futures legs. The Exchange understands it is common for investors to engage in hedging or other investment strategies that involve options and related futures products. However, to execute those investment strategies, investors must submit the options order to the Exchange and separately submit the futures order to a designated contract market ("DCM") on which the futures trade. For example, market participants may obtain positions in Cboe Volatility Index ("VIX") options through transactions on the Exchange and hedge those positions entering into a separate transaction on Cboe Futures Exchange, LLC's ("CFE") centralized market in VIX futures ("VX futures"). Separate executions of this sort create additional risks, including risk that one order will execute while the other does not and price risk resulting from the time it takes to complete both transactions. The Exchange understands that due to those risks and the complexities of multi-part transactions, market participants may instead transact in the over-the-counter ("OTC") market or not obtain a hedge at all. The proposed rule change adopts a mechanism to facilitate the execution of these cross-product transactions in a simple, efficient manner that reduces these execution and price risks.

The Exchange first proposes to adopt a definition of a future-option order. Specifically, the proposed rule change amends Rule 1.1 to define a "future-option order"³ as an order to buy or sell

a stated number of units of an underlying or a related futures contract(s) coupled with the purchase or sale of an option contract(s) on the Exchange.⁴ The Exchange would designate in which classes future-option orders would be available.⁵

The proposed definition of a future-option order includes a risk offset requirement. A user may only submit a future-option order if it satisfies the applicable risk offset requirement. The Exchange believes a risk offset requirement will provide market participants with sufficient flexibility to execute legitimate strategies comprised of options and futures while preventing a market participant from using the proposed execution mechanism to execute a futures trade outside of the normal trading process on the applicable designated contract market by combining the future leg(s), for example, with an inexpensive out-of-the-money option leg.

Pursuant to paragraph (a) of the proposed definition of future-option order, the System will accept a future-option order if the future leg(s) provides no less than 10% and no greater than 125% risk offset to the option leg(s).⁶ A

adopted when all trading on the Exchange occurred in open outcry).

⁴ The proposed definition of a future-option order is similar to the definition of a stock-option order. Rule 1.1 defines a "stock-option order" as an order to buy or sell a stated number of units of an underlying or a related security coupled with either (a) the purchase or sale of option contract(s) on the opposite side of the market representing either the same number of units of the underlying or related security or the number of units of the underlying security necessary to create a delta neutral position or (b) the purchase or sale of an equal number of put and call option contracts, each having the same exercise price and expiration date, and each representing the same number of units of stock as, and on the opposite side of the market from, the underlying or related security portion of the order. The primary difference is the stock-option order definition requires the order to be delta neutral, while the proposed definition of a future-option order requires the order to have a risk offset within a specified range (as described below).

⁵ Pursuant to Rule 1.5, the Exchange announces all determinations it makes pursuant to the Rules via specifications, Notices, or Regulatory Circulars with appropriate advanced notice, which will be posted on the Exchange's website, or as otherwise provided in the Rules; electronic message; or other communication method as provided in the Rules. The Exchange intends to initially permit future-option orders overlying VIX. However, the Exchange may expand the availability of future-option orders to other underlying securities or indexes in the future. If required, the Exchange and would submit rule filings in connection with any such expansion; for example, the Exchange may determine that a different risk offset requirement than what is proposed in this filing is appropriate for another underlying based on the characteristics of the overlying options and futures.

⁶ The user must include a delta value for each option leg of the order when submitting a future-option order. See Rule 1.1 (proposed paragraph (b)(2) of definition of future-option order). While a

future-option order satisfies this risk offset requirement if the net delta value of the order is no greater than -0.10 and no less than -1.25 . The delta value of an option leg equals the expected change in the price of that options contract given a \$1.00 change in the price of the underlying security or index. The delta value of a future leg equals the amount set forth in the rules or contract specifications of the designated contract market ("DCM") on which the future contract trades. The delta value of each option and future leg is multiplied by the applicable multiplier. The sum of the future legs delta values divided by the sum of the option legs delta values, which equals the net delta value for the order.

For VIX future-option orders, the System will calculate the risk offset described above using the net delta value for each "group" of option legs and future legs with the same expiration date. The net delta value of each group must be no greater than -0.10 and no less than -1.25 .⁷ For example, suppose a VIX future-option order is submitted with the following components:

- Sell 1 Dec VX future⁸ with a delta of -1
- Buy 2 Jan VX futures with delta of 1
- Buy 16 Dec VIX option⁹ calls with a delta of 0.50
- Buy 35 Jan VIX option puts with a delta of -0.60

The 1 short Dec VX future is grouped with the 16 long Dec VIX calls, which group has a net delta of $(-1 \times 1,000) / (16 \times .50 \times 100) = -1,000/800 = -0.125$. The 2 long Jan VX futures are grouped with the 35 short Jan VIX puts, which group has a net delta of $(2 \times 1,000) / (35 \times -0.60 \times 100) = -2,000/2,100 = -0.9524$. This order would satisfy the risk offset requirement, as both groups have a net delta between -0.10 and -1.25 . If the System determines that a complex strategy comprised of future and option legs satisfies the risk offset requirement, it accepts all future-option orders for that complex strategy for the remainder of that trading day. This will prevent a situation in which the Exchange accepts a future-option order for a specific complex strategy on a trading day but cannot execute against

user may use any methodology it chooses to calculate the delta value of option legs, the value must be reasonable and will be subject to surveillance by the Exchange's regulatory division. The System will use the user-submitted delta values to calculate the risk offset for the entire order.

⁷ If any option contract leg or future contract leg cannot be grouped with any future leg(s) or option leg(s), respectively, the System rejects a VIX future-option order.

⁸ VX futures have a contract multiplier of 1,000.

⁹ VIX options have a contract multiplier of 100.

³ As proposed, a "future-option order" is deemed an inter-regulatory spread order for purposes of the Rules. Rule 1.1 defines an inter-regulatory spread order as an order involving the simultaneous purchase and/or sale of at least one unit in contracts each of which is subject to different regulatory jurisdictions at stated limits, or at a stated differential, or at market prices on the floor of the Exchange. The proposed rule change modernizes this definition to apply it to the Exchange in general, as opposed to the floor of the Exchange (the definition of inter-regulatory spread order was

future-option orders for the same complex strategy submitted later that trading day but no longer satisfies the risk offset requirement because the delta values have changed since the initial order was submitted.¹⁰

The proposed rule change also amends the definition of “complex order” in Rule 1.1 to provide that unless the context otherwise requires, the term complex order will include future-option orders.¹¹

As proposed in Rule 5.33(o), when a user submits a future-option order to the Exchange:

- if the User is also a member of the DCM on which the applicable future trades and the Exchange has established electronic communication with the DCM, the Exchange will electronically communicate the future component of the future-option order to the DCM on behalf of the User¹²; or
- if the User is not also a member of the DCM on which the applicable future trades or opts out of the direct communication described in the above bulleted paragraph (or such direct communication is unavailable), the User must designate a specific futures commission merchant (“FCM”) or introducing broker (“IB”) with which it has entered into an agreement pursuant to proposed Rule 5.33, Interpretation and Policy .05 (the “designated FCM/IB”) to which the Exchange will communicate the futures component of the future-option order on behalf of the user.¹³ Proposed Interpretation and Policy .05 provides that if the user is not also a member of the DCM on which the applicable future trades or opts out of

the direct communication (or such direct communication is unavailable), to submit a future-option order to the Exchange for execution, a user must enter into an agreement with one or more FCMs or IBs that are not affiliated with the Exchange, which FCM/IB(s) the Exchange has identified as having connectivity to electronically communicate the futures components of future-option orders to the designated contract market on which the futures trade.¹⁴ This will provide users with flexibility to pick which FCM/IB will communicate the futures components of their orders for execution (if an FCM/IB is necessary for communication of the futures component to the DCM).¹⁵

The proposed rule change first amends Rule 5.33 to describe how future-option orders may execute electronically on the Exchange. The proposed rule change adds future-option order to the list of types of complex orders that may be accepted for electronic trading.¹⁶ Specifically, the proposed rule change amends Rule 5.33(b)(5) to reference the proposed definition of future-option order in Rule 1.1 and state that only future-option orders in the classes designated by the Exchange¹⁷ with no more than the applicable number of legs are eligible for electronic processing.¹⁸ Future-option orders submitted for electronic processing may execute pursuant to a complex order auction (“COA”) if eligible as described in Rule 5.33(d) or in the complex order book (“COB”) as described in Rule 5.33(e) and will execute in the same manner as other complex orders, except as described below.

The proposed rule change adopts rule 5.33(f)(1)(C) to provide that users may express bids and offers for a future-option order in any decimal price the

Exchange determines, which will permit the Exchange to accommodate the available pricing of futures. The minimum increment for the option leg(s) of a future-option order is \$0.01 or greater, which the Exchange may determine on a class-by-class basis, regardless of the minimum increments otherwise applicable to the option leg(s),¹⁹ and the future leg(s) of a future-option order may be executed in any decimal price permitted in the designated contract market on which the applicable futures trade. Smaller minimum increments are appropriate for future-option orders as the future component may be able to trade at finer decimal increments permitted by the designated contract market on which the futures trade. The Exchange notes that even with the flexibility provided in the proposed rule, the individual options legs must trade at increments allowed by the Commission.

The proposed electronic execution process of future-option orders is substantially similar to that of stock-option orders. Proposed Rule 5.33(o)(2) provides that a future-option order may execute against other future-option orders (or COA Responses, if applicable), but may not execute against orders in the simple book.²⁰ If a future-option order can execute upon entry or following a COA, or if it can execute following evaluation while resting in the COB pursuant to Rule 5.33(i), the System executes the option component (which may consist of one or more option legs) of a future-option order against the option component of other future-option orders resting in the COB or COA responses pursuant to the allocation algorithm applicable to the class (pursuant to Rule 5.33(d)(5)(A)(ii)), as applicable, but does not immediately send the user a trade execution report, and then automatically communicates the future component(s) to the DCM or the designated FCM/IB, as applicable, for execution at the DCM on which the futures trade. If the System receives an execution report for the future component from the DCM or the designated FCM/IB, as applicable, the Exchange sends the user the trade execution report for the future-option order, including execution information for the future and option components. If the System receives a report from the DCM or the designated FCM/IB, as applicable, that the future component(s)

¹⁰ It is for this reason a user may not designate a future-option order submitted for electronic processing as GTC or GTD. See proposed Rule 1.1 (proposed paragraph (b)(1) of definition of future-option order).

¹¹ The term complex order already includes cross-product orders such as stock-option orders and security future-option orders.

¹² Unlike stock, a future trades on one DCM, which would make such direct communication with the DCM possible. This would only be available if the DCM and Exchange established electronic communication between the two markets to permit this direct communication of the futures component.

¹³ As is the case with any order submitted to the Exchange, only authorized Users and associated persons of Users may establish connectivity to and access the Exchange to submit orders. See Rule 5.5(a). A “User” is defined as a Trading Permit Holder (“TPH”) or Sponsored User who is authorized to obtain access to the System pursuant to Rule 5.5. See Rule 1.1 (definition of User). The Exchange currently has no Sponsored Users, so the term “User” at present is synonymous with the term “TPH.” The User and any individuals associated with the User that submits a future-option order must have any required futures industry registrations and comply with applicable rules of the designated contract market on which the futures trades and the Commodity Futures Trading Commission (“CFTC”).

¹⁴ This requirement is substantially identical to that required for stock-option orders.

¹⁵ The Exchange intends to establish an arrangement with one or more FCMs/IBs that are members of the applicable designated contract market, pursuant to which arrangement those FCMs/IBs will have connectivity to the Exchange to receive the futures components of future-option orders and communicate those to the applicable designated contract market for execution of these futures components.

¹⁶ The proposed rule change also amends Rule 5.70(b) to provide that the Exchange may make future-option orders available for flexible (FLEX) options trading.

¹⁷ This flexibility with respect to classes is necessary given the Exchange would need to establish a relationship with appropriate DCMs on which futures trade before it would be able to accept future-option orders that contain futures legs that trade on those DCMs.

¹⁸ The proposed rule change also provides that future-option orders will execute (electronically) in the same manner as other complex orders except as otherwise specified in Rule 5.33.

¹⁹ This is consistent with the permissible pricing of options legs of complex orders and stock-option orders. See Rule 5.4(b) and 5.33(f)(A) and (B).

²⁰ See also proposed Rule 5.33(g)(5) (which provides that future-option orders, like stock-option orders, may not leg into the simple book).

cannot execute,²¹ the Exchange nullifies the option component trade and notifies the user of the reason for the nullification. If a future-option order is not marketable, it rests in the COB (if eligible to rest) or routes to PAR for manual handling, subject to a user's instructions. The Exchange believes this proposed process is reasonable, because the options and futures components of a future-option order are submitted for execution as part of the same investment strategy. Given this, if the future component does not execute, the Exchange believes it is reasonable to expect that a user that submitted a future-option order to request nullification of the options trade (as permitted by Rule 6.5). If the future component does not execute, rather than require the user that submitted the future-option order to contact the Exchange to request nullification of the option component execution pursuant to Rule 6.5, the proposed rule eliminates this requirement for the user to make such request. Instead, the proposed rule change provides that the Exchange will automatically nullify the option transaction if the future component does not execute. The Exchange believes such nullification without a request from the user is consistent with the purpose of future-option orders, as contingent execution at or near the same time (and thus reduction in price and execution risk) is one of the primary goals of future-option orders (as further discussed below).

Future-option orders may also be submitted for execution (if eligible) in the complex automated improvement mechanism ("C-AIM") as described in Rule 5.38 or complex solicitation auction mechanism ("C-SAM") as described in Rule 5.40. Processing of future-option orders through C-AIM or C-SAM will occur in the same manner as any other complex orders submitted into those execution mechanisms.

Proposed Rule 5.33(o)(2) provides that a future-option order may only execute if the price complies with subparagraph (f)(2)(B). The proposed rule change amends Rule 5.33(f)(2) to describe the permissible execution prices and priority of future-option orders, which is substantially similar to that of stock-

option orders. Specifically, proposed Rule 5.33(f)(2)(C) states for a future-option order with one option leg, the option leg may not trade at a price worse than the individual component price on the simple book or at the same price as a priority customer order on the simple book. For a future-option order with more than one option leg, the option legs must trade at price pursuant to Rule 5.33(f)(2)(A), which is the permissible execution prices and priority for complex orders comprised of option legs. The System, therefore, will not execute a future-option order at a net price: (1) that would cause any option component of the complex strategy to be executed at a price of zero; (2) that would cause any option component of the complex strategy to be executed at a price worse than the individual component prices on the simple book; (3) worse than the price that would be available if the complex order legged into the simple book; or (4) worse than the synthetic best bid or offer ("SBBO")²² or equal to the SBBO when there is a priority customer order on any leg comprising the SBBO and, if a conforming complex order,²³ at least one option component of the complex order must execute at a price that improves the best bid or offer ("BBO") for that component by at least one minimum increment or, if a nonconforming complex order,²⁴ the option component(s) of the complex order for the leg(s) with a priority customer order at the BBO must execute at a price that improves the price of that priority customer order(s) on the simple book by at least one minimum

²² The proposed rule change adds subparagraph (3) to the definition of SBBO in Rule 5.33(a) to provide that the SBBO is the best net bid and best net offer on the Exchange for a complex strategy calculated using, for future-option orders, the BBO for each component (or the national best bid or offer ("NBBO") for a component if the BBO for that component is not available) and the daily quotation range for each future component. Similarly, the proposed rule change adds subparagraph (3) to the definition of synthetic national best bid or offer ("SNBBO") in Rule 5.33(a) to provide that the SNBBO is the national best net bid and net offer for a complex strategy calculated using, for future-option orders, the NBBO for each option component and the daily quotation range for each future component.

²³ The proposed rule change amends the definition of "conforming complex order" in Rule 1.1 to provide that a future-option order is conforming (1) if the ratio on the options legs is greater than or equal to one-to-three (.333) or less than or equal to three-to-one (3.00) or (2) the options legs comprise an Index Combo order (as defined in Rule 5.33(b)).

²⁴ The proposed rule change amends the definition of "nonconforming complex order" in Rule 1.1 to provide that a future-option order is nonconforming if the ratio of its options legs is less than one-to-three (.333) or greater than three-to-one (3.00) (unless the options legs comprise an Index Combo order).

increment.²⁵ Pursuant to these proposed changes, the option component(s) of a future-option order will ultimately trade in the same manner and in accordance with the same priority principles as they would if they had been submitted without a future leg.

The proposed rule change also amends Rules in Chapter 5, Section G of the Rulebook to describe how future-option orders may execute in open outcry on the Exchange's trading floor, which is substantially similar to the open outcry execution process of stock-option orders. Specifically, the proposed rule change amends Rule 5.83(b) to provide that the Exchange may make future-option orders available for PAR routing for manual handling (as is the case for other complex orders, including stock-option orders). The proposed rule change further amends this provision to provide that the Exchange may determine (as it can for other nonconforming complex orders and non-conforming stock-option orders) to make nonconforming future-option orders not eligible for electronic processing, in which case such orders would only be eligible for manual handling and open outcry trading. The proposed rule change amends Rule 5.85(g) to provide that a bid or offer that is identified to the trading crowd as part of a future-option order is made and accepted subject to the following conditions (which are the same conditions applicable to stock-option orders): (1) at the time the future-option order is announced, the TPH initiating the order must disclose to the crowd all legs of the order and identify the specific market(s) on which and the price(s) at which the non-option leg(s) of the order is to be filled; and (2) concurrent with the execution of the options leg of the order, the initiating TPH and each TPH that agrees to be a contra-party on the non-option leg(s) of the order must take steps immediately to transmit the non-option leg(s) to the identified market(s) for execution.²⁶ Proposed Rule 5.85(b)(3) provides, however, that (like the stock component of stock-option orders) a floor broker or PAR official may, subject to a User's instructions, route the future component of a future-option order represented in open outcry to the DCM or an Exchange-

²⁵ All-or-none complex orders (including future-option orders) may only execute at prices better than the SBBO.

²⁶ The proposed rule change also updates Rule 5.85(g)(2) to provide that a trade representing execution of the options leg of a future-option order may be cancelled at the request of any TPH that is a party to that trade only if market conditions in any of the non-Exchange market(s) prevent the execution of the non-option leg(s) at the price(s) agreed upon.

²¹ Execution of the futures components will need to satisfy requirements of the applicable designated contract market, including informational and reporting time requirements, risk controls, and price restrictions (such as needing to be within the daily quotation range). Pursuant to Rule 5.33(k), trading in any complex strategy (including one that comprises a future-option order) is suspended if any component of a complex strategy (including a future leg) is halted. Therefore, if trading in a future is halted, it could not execute and would result in the future-option order not being executed.

designated FCM/IB not affiliated with the Exchange for execution at a designated contract market on which the futures trade in accordance with proposed Rule 5.33, Interpretation and Policy .05.²⁷ The Exchange also proposes to add subparagraph (5) to Rule 5.85(g) (which is substantially similar to Rule 5.85(g)(4) for stock-option orders) to provide that a TPH or PAR official may route the future component of an eligible future-option order represented in open outcry from PAR directly to a designated FCM/IB (as defined in Rule 5.33(o)) not affiliated with the Exchange for electronic execution at the designated contract market on which the futures trade (1) in accordance with the order's terms, and (2) as a single order or as a paired matching order (including with orders transmitted from separate PAR workstations). TPHs seeking to route the future component of a future-option order represented in open outcry through PAR to an Exchange-designated FCM/IB not affiliated with the Exchange for electronic execution at the designated contract market on which the futures trade must comply with proposed Rule 5.33(o).²⁸ The Exchange proposes to amend Rule 5.91(g) to provide that as they currently can for complex orders (including stock-option orders), floor brokers may leg future-option orders where one of the legs is executed on the Exchange.

The proposed rule change amends Rule 5.85(b)(3) to describe the priority that will apply to future-option orders executed on the Exchange's trading floor. Specifically, the proposed rule change provides that future-option orders have priority over bids (offers) of in-crowd market participants but not over priority customer bids (offers) in the book. Specifically, future-option orders, like stock-option orders, will have priority over bids and offers of in-crowd market participants on the trading floor. Further, the options legs of conforming and nonconforming future-option orders may be executed at the same net debit and credit prices as the options legs of stock-option orders.

²⁷ The proposed rule change also makes a nonsubstantive amendment to Rule 5.85(b)(3) to correct the current cross-reference to Rule 5.11 to Rule 5.33, Interpretation and Policy .04, which is the applicable rule to be referenced.

²⁸ If any TPH that is a party to a trade representing the execution of the options leg of a future-option order requests, if market conditions in any of the non-Exchange market(s) prevent the execution of the non-option leg(s) at the price(s) agreed upon, the execution of the option leg may be cancelled. See proposed Rule 5.87, Interpretation and Policy .03. This is consistent with what is permissible for stock-option orders, as well as the proposed electronic processing of future-option orders set forth in proposed Rule 5.33(o).

Pursuant to proposed Rule 5.85(b)(4), a conforming future-option order may be executed at a net debit or credit price without giving priority to equivalent bids (offers) in the individual series legs that are represented in the trading crowd or in the book if the price of at least one option leg of the order improves the corresponding bid (offer) of a priority customer order(s) in the book by at least one minimum trading increment as set forth in Rule 5.4(b).²⁹ Additionally, pursuant to proposed Rule 5.85(b)(5), a nonconforming future-option order may be executed at a net debit or credit price without giving priority to equivalent bids (offers) in the individual series legs that are represented in the trading crowd or in the book if each option leg of the order betters the corresponding bid (offer) of a priority customer order(s) in the book on each leg by at least one minimum trading increment as set forth in Rule 5.4(b).³⁰

The Exchange proposes to amend Rule 6.5, Interpretation and Policy .07 to describe how a future-option order may qualify as an obvious error. As proposed, future-option orders will be handled in a similar manner as stock-option orders for purposes of Rule 6.5. Specifically, if the option leg of a future-option order qualifies as an obvious error under Rule 6.5(c)(1) or catastrophic error under Rule 6.5(d)(1), then the option leg that is an obvious or catastrophic error will be adjusted in accordance with Rule 6.5(c)(4)(A) or (d)(3), respectively, regardless of whether one of the parties is a customer. However, the option leg of any customer future-option order will be nullified if the adjustment would result in an execution price higher (lower) for buy (sell) transactions than the customer's limit price on the future-option order,

²⁹ In other words, if there is a priority customer order on every leg comprising the SBBO, at least one option leg of the future-option order must execute at a price that improves the price of the priority customer order on the simple book for that leg by at least one minimum increment. This is the same priority that applies to a conforming complex order (comprised of all option legs) as set forth in Rule 5.85(b)(1), and thus the options legs of a conforming future-option order will execute subject to the same priority as they would if they had been submitted without a future leg.

³⁰ In other words, if there is a priority customer order on any leg(s) comprising the SBBO, the component(s) of the future-option order for the option leg(s) with a priority customer order at the BBO must execute at a price that improves the price of that priority customer order(s) on the simple book by at least one minimum increment. This is the same priority that applies to a nonconforming complex order (comprised of all option legs) as set forth in Rule 5.85(b)(2), and thus the options legs of a nonconforming future-option order will execute subject to the same priority as they would if they had been submitted without a future leg.

and the Exchange will attempt to nullify the future leg. Whenever a DCM nullifies the futures leg(s) of a future-option order or whenever the future leg(s) cannot be executed, the Exchange will nullify the option leg upon request of one of the parties to the transaction or in accordance with Rule 6.5(c)(3).

Finally, the proposed rule change adds Interpretation and Policy .02 to Rule 6.6 to clarify that TPHs may update only the option component of a future-option order trade using Clearing Editor (and as permitted by Rule 6.6). Any updates to the future component would need to be done in accordance with the Rules of the applicable DCM (if permissible).

Execution of the options components of future-option orders will be subject to Commission jurisdiction, and execution of the futures components of future-option orders will be subject to Commodity Futures Trading Commission ("CFTC") jurisdiction. Further, each of the Exchange and the designated contract market on which the futures component of a future-option order trades will regulate conduct relating to future-option orders and trades with respect to compliance with its rules, including bringing disciplinary actions for violations of its rules. Before authorizing a class of future-option orders to trade on the Exchange, the Exchange would enter into an information sharing agreement with the designated contract market on which the applicable future trades that encompasses information relating to future-option orders and trades.³¹ This would allow for the sharing of information between the Exchange and the DCM to permit the Exchange (and the DCM) to have access to all order, trade, regulatory, and other data relating to these orders and trades.

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the "Act") and the rules and regulations thereunder applicable to the Exchange and, in particular, the requirements of Section 6(b) of the Act.³² Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)³³ requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged

³¹ The Exchange already has one in place with CFE for purposes of VIX future-option orders.

³² 15 U.S.C. 78f(b).

³³ 15 U.S.C. 78f(b)(5).

in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Additionally, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)³⁴ requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

In particular, the Exchange believes the proposed rule change will remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest because it will provide investors with greater opportunities to manage risk. The proposed rule change would provide investors with a more efficient mechanism to execute options and related future products, which investors regularly trade as part of hedging and other investment strategies. The proposed execution mechanism for future-option orders will make the trading and hedging process for investment strategies comprised of option and future components more efficient, which will reduce execution, legging, and price drift risk that otherwise accompanies the current execution process for these strategies. For example, today, investors looking to execute an investment strategy comprised of option and future components must do so through separate trades—one for the options and one for the futures. This creates risk that one trade occurs but the other does not, which may leave an investor with an unhedged position. Additionally, separate transactions create risk because market conditions may change between the time it takes to execute both transactions, which may make the full package execute in an unfavorable manner for the investor. Investors may continue to execute these strategies as separate transactions if they so choose. However, the addition of the proposed execution process (both electronic and open outcry) would provide investors with an optional, alternative means to execute strategies comprised of future and options components that would reduce these risks, as it would permit the entire package to be priced together and will result in an execution only if both the options and futures components are able to trade. The proposed single execution mechanism, therefore, expands the ability of market

participants to engage in cross-product investment and hedging transactions, which the Exchange believes will contribute to reduced overall market risk and increased liquidity.

The Exchange believes the proposed rule change is designed to prevent fraudulent and manipulative acts and practices and to promote just and equitable principles of trade. The proposed risk offset requirement is designed to provide market participants with sufficient flexibility to execute legitimate options strategies comprised of options and futures while preventing misuse of this mechanism, such as a market participant from using the proposed execution mechanism to execute a futures trade outside of the normal trading process on the applicable designated contract market by combining the future leg(s), for example, with an inexpensive out-of-the-money option leg.

As discussed above, the Commission and the CFTC will maintain jurisdiction over execution of the options and futures components, respectively, of future-option orders. Further, each of the Exchange and the DCM on which the futures component of a future-option order trades will regulate conduct relating to future-option orders and trades with respect to compliance with its rules, including bringing disciplinary actions for violations of its rules.³⁵ The Exchange is a member of the Intermarket Surveillance Group (“ISG”). The ISG members work together to coordinate surveillance and investigative information sharing in the futures and options markets, and the Exchange would therefore have access to information regarding relevant trading activity from other ISG members, including applicable DCMs (as CFE is) that are also members. Before authorizing a class of future-option orders to trade on the Exchange, if the applicable DCM was not a member of ISG, or if the applicable DCM was a member of ISG but the Exchange still deemed appropriate, the Exchange would enter into an information sharing agreement with the designated contract market on which the applicable future trades that encompasses information relating to future-option orders and trades. This would allow for the sharing of information between the Exchange and the designated contract market to permit the Exchange (and the designated contract market) to have access to all order, trade, regulatory, and other data relating to these orders and

trades, and thus facilitate the intermarket surveillance of future-option orders. As a self-regulatory organization, the Exchange recognizes the importance of surveillance, among other things, to detect and deter fraudulent and manipulative trading activity as well as other violations of Exchange rules and the federal securities laws. The Exchange’s current rules prohibiting market manipulation and fraudulent, noncompetitive, and disruptive trading practices will apply to future-option orders. The Cboe Regulatory Division will incorporate information it receives from the designated contract market into its surveillance procedures to monitor trading of future-option orders, including to detect any manipulative trading activity. The Exchange believes its surveillance, along with the proposed risk offset requirement, are reasonably designed to detect manipulative trading and enforce compliance with the proposed rules and other Exchange Rules. The Exchange performs ongoing evaluations of its surveillance program to ensure its continued effectiveness and will continue to review its surveillance procedures on an ongoing basis and make any necessary enhancements and/or modifications that may be needed for future-option orders.

The Exchange believes the proposed execution process will also promote just and equitable principles of trade. As described above, future-option orders will execute in a substantially similar way as complex orders, including stock-option orders. The proposed priority for future-option orders will protect customer orders in the simple book. As proposed, the option component(s) of a future-option order will ultimately trade in the same manner and in accordance with the same priority principles as they would if they had been submitted without a future leg. Further, the proposed process to nullify the option component execution if the future-option order does not execute is consistent with the purpose of the future-option order. Given the option and future components of a future-option order are submitted as part of the same investment strategy, if the future component does not execute, the Exchange believes it is reasonable to expect that a user that submitted a future-option to request nullification of the options trade in accordance with current Exchange Rules. If the future component does not execute, rather than require the user that submitted the future-option order to contact the Exchange to request nullification of the

³⁵ This would include any rules the designated contract market related to the execution of the future component of a future-option order.

³⁴ *Id.*

option component execution, the proposed rule eliminates this requirement for the user to make such request. Instead, the proposed rule change provides that the Exchange will automatically nullify the option transaction if the future component does not execute. The Exchange believes such nullification without a request from the user is consistent with the purpose of future-option orders, as contingent execution at or near the same time (and thus reduction in price and execution risk) is one of the primary goals of future-option orders (as further discussed below).

Additionally, the Exchange believes the availability of future-option orders will remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest because it will provide investors with an alternative to the OTC market for investment strategies comprised of future and option components. The proposed rule change will provide investors with the ability to execute these investment strategies in a listed market environment as opposed to in the unregulated OTC market. The proposed rule change may shift liquidity from the OTC market onto the Exchange (as well as shift swaps and OTC combos from the OTC market onto designated contract markets in the form of futures), which the Exchange believes would increase market transparency as well as enhance the process of price discovery conducted on the Exchange through increased order flow to the benefit of all investors. The Exchange believes it may be a more attractive alternative to the OTC market, because trading these strategies in an exchange environment may benefit market participants in several ways, including but not limited to the following: (1) enhanced efficiency in initiating and closing out positions; (2) increased market transparency; and (3) heightened contra-party creditworthiness due to clearing requirements for listed options and futures.

The Commission previously determined that permitting investors to submit an order for execution to Cboe that included components subject to different regulatory jurisdictions was consistent with the Act.³⁶ Specifically, in 1988, the Commission approved a Cboe proposed rule change to allow

inter-regulatory spread orders (which were defined as the simultaneous purchase and/or sale of at least one unit in contracts each of which is subject to different regulatory jurisdictions at stated limits, or at a stated differential, or at market prices on the floor of the Exchange) to trade on Cboe's trading floor.³⁷ The only substantive differences between that proposal and the proposed rule change regarding future-option orders are as follows:

- The proposed rule change would permit future-option orders in classes authorized by the Exchange, dependent upon agreements the Exchange may make with applicable DCMs, compared to the prior filing that was limited to orders comprised of two options and two related futures.³⁸ The Exchange believes this is reasonable because the proposed rule change will provide the Exchange with the ability to expand the availability of future-option order functionality in the future to accommodate additional investment strategies of investors, and the proposed rules regarding future-option orders would apply in the same manner regardless of the underlying components.³⁹

- The proposed rule change would permit electronic execution in addition to open outcry execution of future-option orders. This merely reflects the advancement in the availability of electronic trading since 1988 and provides an additional manner of execution for future-option orders.

- The proposed rule change does not create a separate pit on the Exchange's trading floor for the related futures as the prior proposal did. Given the advances in electronic trading (and the fact that many futures exchanges no longer have open outcry trading), the Exchange believes this is no longer necessary to permit future-option orders.⁴⁰

³⁷ See CBOE-CBOT JV Approval Order.

³⁸ Inter-regulatory spreads subject to that proposal were limited to those comprised of S&P 500 Index options and CBOE 50 futures, and S&P 100 Index options and S&P 250 futures.

³⁹ As noted above, if the Exchange determines a different risk offset requirement would be appropriate for a different class of future-option orders, it will submit a rule filing as necessary to implement that requirement.

⁴⁰ As an example, VX futures trade electronically only on CFE. For similar reasons, the Exchange believes structuring future-option orders as a joint venture is unnecessary, as the individual components will continue to trade on the applicable market as proposed. As noted above, the Exchange will be able to share information with the applicable DCM (through ISG or information sharing agreements) for regulatory purposes. It is possible the Exchange and the designated contract market may enter into other agreements as appropriate to permit future-option orders (e.g., to establish electronic connections for purposes of

These differences have no impact on the fundamental attributes of the underlying product that the Commission approved in 1988 and that the Exchange proposes in this filing, which is a multi-part order comprised of an option and a related future submitted to the Exchange for pricing as a package, with execution of each component contingent on the other. When approving the prior proposal, the Commission stated that permitting execution of inter-regulatory spreads (including for hedging purposes) on the Exchange would "contribute to the mechanism of a free and open market by enhancing . . . market makers' ability to hedge their positions with futures [and] enable market makers to better accommodate customer orders and to provide deeper and tighter markets."⁴¹ The Commission further stated that the proposed rule change was designed to minimize regulatory concerns, and clarifying the regulatory responsibility for each leg of an inter-regulatory spread (as the current filing does) would "expedite the enforcement of each jurisdiction's regulations and foster coordination and cooperation between the jurisdictions involved."⁴²

Ultimately, the Commission found that the proposal to execute inter-regulatory spreads on Cboe to be consistent with the requirements of the Act.⁴³ While some time has passed since approving inter-regulatory spreads (the Exchange notes the rules permitted execution of inter-regulatory spreads remained in Cboe's Rulebook until 2005,⁴⁴ and the definition of an inter-regulatory spread remains in Cboe's Rulebook⁴⁵), the Exchange is unaware of any changes to Section 6(b)(5) of the Act since the Commission approved that the trading of inter-regulatory spreads that would prevent the Commission from approving future-option orders at this time.

Further, as discussed above, the proposed rules regarding the handling and execution of future-option orders are also substantially similar to that of stock-option orders,⁴⁶ and rules previously filed with the Commission

routing the futures component), but such agreements would have no impact on the proposed rules.

⁴¹ See CBOE-CBOT JV Approval Order at 46729.

⁴² *Id.* at 46730.

⁴³ *Id.*

⁴⁴ See Securities Exchange Act Release No. 52824 (November 22, 2005), 70 FR 72318 (December 2, 2005) (SR-CBOE-2005-69).

⁴⁵ See Rule 1.1 (definition of inter-regulatory spread).

⁴⁶ See Rules 5.33 (including subparagraphs (f)(1)(B) and (2)(B), paragraph (l), and Interpretation and Policy .04), 5.70(b), 5.83(b), and 5.85 (including subparagraphs (b)(3) through (5) and paragraph (g)).

³⁶ Securities Exchange Act Release No. 26271 (November 10, 1988), 53 FR 46727 (November 18, 1988) (SR-CBOE-88-17) ("CBOE-CBOT JV Approval Order"); see also Securities Exchange Act Release No. 24235 (March 19, 1987), 52 FR 9750 (March 26, 1987) (SR-Phlx-86-43).

for security-future option orders.⁴⁷ The only substantive difference between stock-option orders (and security-future option orders) is that one component of a future-option order (the future leg(s)) is not subject to Commission jurisdiction. The Exchange believes market participants who trade want to trade these strategies because they have determined these strategies are the most appropriate to achieve their investment goals should be able to avail themselves of a more efficient and lower risk execution mechanism for these strategies, even though those strategies happen to include a component subject to jurisdiction of another regulator.

Ultimately, the Exchange believes the proposed rule change will remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest because it will provide investors with a competitive and efficient market mechanism for executing investment strategies comprised of future-option orders on the Exchange, which will provide a venue for order exposure and price discovery. These are bona fide investment strategies that reduce market participants' risk and facilitate hedging. A robust and competitive market requires that exchanges respond to investors' evolving needs by constantly improving their offerings. When Congress charged the Commission with supervising the development of a "national market system" for securities, Congress stated its intent that the "national market system evolve through the interplay of competitive forces as unnecessary regulatory restrictions are removed.⁴⁸ Consistent with this purpose, Congress and the Commission have repeatedly stated their preference for competition, rather than regulatory intervention to determine products and services in the securities markets.⁴⁹ This

consistent and considered judgment of Congress and the Commission is correct, particularly in light of evidence of robust competition in the options trading industry. The fact that an exchange proposed something new is a reason to be receptive, not skeptical—innovation is the life-blood of a vibrant competitive market—and that is particularly so given the continued internalization of the securities markets, as exchanges continue to implement new products and services to compete not only in the United States but throughout the world. Options exchanges continuously adopt new and different products and trading services in response to industry demands in order to attract order flow and liquidity to increase their trading volume. This competition has led to a growth in investment choices, which ultimately benefits the marketplace and the public. The Exchange believes that the proposed rule change will help further competition by providing market participants with yet another investment option for the listed options market.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange does not believe that the proposed rule change will impose any burden on intramarket competition that is not necessary or appropriate in furtherance of the purposes of the Act, because future-option orders will be available to all TPHs and will execute in the same manner. Future-option orders will be available to all users on a voluntary basis, and users will not be required to use future-option orders to execute investment strategies comprised of option and future components. Users may continue to execute these strategies as they do today by entering an option order on the Exchange and separately executing the future component on a designated contract market. For users that elect to use the proposed functionality, the proposed rule change would reduce price and execution risk that currently exists when executing these strategies.

for overseeing the [self-regulatory organizations] and the national market system. Indeed, competition among multiple markets and market participants trading the same products is the hallmark of the national market system." and Regulation NMS, 70 FR at 37499 (observing that NMS regulation "has been remarkably successful in promoting market competition in [the] forms that are most important to investors and listed companies").

The Exchange does not believe the proposed rule change will impose any burden on intermarket competition that is not necessary or appropriate in furtherance of the purposes of the Act, because other options exchanges may propose similar functionality (and previously have, as noted above). The Exchange understands investors currently execute investment strategies comprised of option and future components today. Investors may continue to do so; however, the proposed rule change merely provides them a simple, efficient, transparent, and competitive execution mechanism for hedging and other investment strategies that contain options and related futures components.

The Exchange believes the proposed rule change may relieve any burden on, or otherwise promote, competition. The proposed rule change is designed to provide investors with a more efficient and lower risk mechanism to execute investment strategies comprised of futures and options components. The Exchange believes this is an enhancement to executing these investment strategies in a riskier and more complex manner through separate transactions or in the unregulated and opaque OTC market. The proposed rule change would make a more attractive alternative to either of these options by providing investors with the ability to execute these strategies in a single transaction in an exchange environment. This would result in increased market transparency, enhanced efficiency in initiating and closing out positions, and heightened contra-party creditworthiness.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange neither solicited nor received written comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the Exchange consents, the Commission will:

A. by order approve or disapprove such proposed rule change, or

B. institute proceedings to determine whether the proposed rule change should be disapproved.

⁴⁷ See Securities Exchange Act Release No. 49367 (March 5, 2004), 69 FR 11678 (March 11, 2004) (SR-CBOE-2004-14); see also Securities Exchange Act Release Nos. 46390 (August 21, 2002), 67 FR 55290 (August 28, 2002) (SR-ISE-2002-18); and 48894 (December 8, 2003), 68 FR 70328 (December 17, 2003) (SR-PCX-2003-42).

⁴⁸ See H.R. Rep. No. 94-229, at 92 (1975) (Conf. Rep.).

⁴⁹ See S. Rep. No. 94-75, 94th Cong., 1st Sess. 8 (1975) ("The objective [in enacting the 1975 amendments to the Exchange Act] would be to enhance competition and to allow economic forces, interacting within a fair regulatory field, to arrive at appropriate variations in practices and services."); Order Approving Proposed Rule Change Relating to NYSE Arca Data, Securities Exchange Act Release No. 59039 (December 2, 2008), 73 FR 74770 (December 9, 2008) ("The Exchange Act and its legislative history strongly support the Commission's reliance on competition, whenever possible, in meeting its regulatory responsibilities

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (<https://www.sec.gov/rules/sro.shtml>); or
- Send an email to rule-comments@sec.gov. Please include file number SR-CBOE-2024-042 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090.

All submissions should refer to file number SR-CBOE-2024-042. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (<https://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR-CBOE-2024-042 and should be submitted on or before October 29, 2024.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.⁵⁰

Vanessa A. Countryman,
Secretary.

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-101233; File No. SR-CboeBZX-2024-091]

Self-Regulatory Organizations; Cboe BZX Exchange, Inc.; Notice of Filing of a Proposed Rule Change To List and Trade Shares of the Franklin Crypto Index ETF, a Series of the Franklin Crypto Trust, Under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares

October 2, 2024.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"),¹ and Rule 19b-4 thereunder,² notice is hereby given that on September 19, 2024, Cboe BZX Exchange, Inc. ("Exchange" or "BZX") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Cboe BZX Exchange, Inc. ("BZX" or the "Exchange") is filing with the Securities and Exchange Commission ("Commission" or "SEC") a proposed rule change to list and trade shares of the Franklin Crypto Index ETF (the "Fund"), a series of the Franklin Crypto Trust (the "Trust"),³ under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares.

The text of the proposed rule change is also available on the Exchange's website (http://markets.cboe.com/us/equities/regulation/rule_filings/bzx/), at the Exchange's Office of the Secretary, and at the Commission's Public Reference Room.

⁵⁰ 17 CFR 200.30-3(a)(12).

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

³ The Trust was formed as a Delaware statutory trust on August 13, 2024. The Fund is operated as a partnership for U.S. federal tax purposes. The Trust and the Fund have no fixed termination date.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to list and trade the Shares under BZX Rule 14.11(e)(4),⁴ which governs the listing and trading of Commodity-Based Trust Shares on the Exchange.⁵ Franklin Holdings, LLC is the sponsor of the Fund ("Sponsor"). The Shares will be registered with the Commission by means of the Trust's registration statement on Form S-1 (the "Registration Statement").⁶

Section 6(b)(5) and the Applicable Standards

The Commission has approved numerous series of Trust Issued Receipts,⁷ including Commodity-Based Trust Shares,⁸ to be listed on U.S. national securities exchanges. In order for any proposed rule change from an exchange to be approved, the

⁴ The Commission approved BZX Rule 14.11(e)(4) in Securities Exchange Act Release No. 65225 (August 30, 2011), 76 FR 55148 (September 6, 2011) (SR-BATS-2011-018).

⁵ Any of the statements or representations regarding the index composition, the description of the portfolio or reference assets, limitations on portfolio holdings or reference assets, dissemination and availability of index, reference asset, and intraday indicative values, or the applicability of Exchange listing rules specified in this filing to list a series of Other Securities (collectively, "Continued Listing Representations") shall constitute continued listing requirements for the Shares listed on the Exchange.

⁶ On August 16, 2024, the Trust filed with the Commission the Registration Statement on Form S-1, submitted to the Commission by the Sponsor on behalf of the Trust (333-281615). The descriptions of the Trust, the Shares, and the Index (as defined below) contained herein are based, in part, on information in the Registration Statement. The Registration Statement is not yet effective and the Shares will not trade on the Exchange until such time that the Registration Statement is effective.

⁷ See Exchange Rule 14.11(f).

⁸ Commodity-Based Trust Shares, as described in Exchange Rule 14.11(e)(4), are a type of Trust Issued Receipt.

Commission must determine that, among other things, the proposal is consistent with the requirements of Section 6(b)(5) of the Act, specifically including: (i) the requirement that a national securities exchange's rules are designed to prevent fraudulent and manipulative acts and practices; and (ii) the requirement that an exchange proposal be designed, in general, to protect investors and the public interest.

The Commission has historically approved or disapproved exchange filings to list and trade series of Trust Issued Receipts, including spot-based Commodity-Based Trust Shares, on the basis of whether the listing exchange has in place a comprehensive surveillance sharing agreement with a regulated market of significant size related to the underlying commodity to be held.⁹ The Commission has also consistently recognized, however, that this is not the exclusive means by which an ETP listing exchange can meet this statutory obligation.¹⁰ A listing exchange could, alternatively, demonstrate that “other means to prevent fraudulent and manipulative acts and practices will be sufficient” to justify dispensing with a surveillance-

sharing agreement with a regulated market of significant size.

Both the Exchange and Chicago Mercantile Exchange (“CME”) are members of the Intermarket Surveillance Group (“ISG”).¹¹ With this in mind, the CME ether futures (“Ether Futures”) market and the CME bitcoin futures (“Bitcoin Futures”) market are the proper markets to consider in determining whether there is a related regulated market of significant size. Recently, the Commission issued orders granting approval for proposals to list bitcoin-based (“Spot Bitcoin ETPs”) ¹² and ether-based (“Spot Ether ETPs”) ¹³ commodity trust and trust issued receipts (these funds are nearly identical to the Fund but hold either bitcoin *or* ether instead of bitcoin *and* ether). In the Spot Bitcoin ETP Approval Order, the Commission stated:

[B]ased on the record before the Commission and the improved quality of the correlation analysis in the record . . . the Commission is able to conclude that fraud or manipulation that impacts prices in spot bitcoin markets would likely similarly impact CME bitcoin futures prices. And because the CME's surveillance can assist in detecting those impacts on CME bitcoin futures prices, the Exchanges' comprehensive surveillance-sharing agreement with the CME—a U.S. regulated market whose bitcoin futures market is consistently highly correlated to spot bitcoin, albeit not of “significant size” related to spot bitcoin—can be reasonably expected to assist in surveilling for fraudulent and manipulative acts and practices in the specific context of the [p]roposals.¹⁴

In the Spot Ether ETP Approval Order the Commission also concluded that fraud or manipulation that impacts prices in spot ether markets would likely similarly impact CME Ether Futures prices. Further, for the same reasons that the CME's surveillance can assist in detecting those impacts on CME Ether Futures prices, the Exchange's comprehensive surveillance-

sharing agreement with the CME can be reasonably expected to assist in surveilling for fraudulent and manipulative acts and practices in the specific context of the proposals.

In sum, in the Spot Bitcoin ETP Approval Order and Spot Ether ETP Approval Order the Commission established that the CME Bitcoin Futures market and CME Ether Futures market can reasonably be expected to assist for fraudulent and manipulative acts and practices. Further, the listing exchanges demonstrated “other means to prevent fraudulent and manipulative acts and practices will be sufficient” to justify dispensing with the “significant size” portion of the “regulated market of significant size” test.

The Exchange notes that the Commission has also previously approved the listing and trading of a series of Commodity-Based Trust Shares on another exchange that, like the Fund, holds two commodities.¹⁵ Given this and the above, the Exchange believes the Shares satisfy the requirements of Exchange Rule BZX Rule 14.11(e)(4) and thereby qualify for listing and trading on the Exchange.

Franklin Crypto Index ETF

CSC Delaware Trust Company, a subsidiary of the Corporation Service Company, is the trustee (“Trustee”). Bank of New York Mellon is the custodian for the Fund's cash and cash equivalents ¹⁶ (the “Cash Custodian”) and also serves as the Fund's administrator and transfer agent (the “Administrator” or “Transfer Agent”). Coinbase Custody Trust Company, LLC (the “Digital Custodian”) will be responsible for custody of the Fund's bitcoin and ether. According to the Registration Statement, each Share will represent a fractional undivided beneficial interest in the Fund's net assets. The Fund's assets will only consist of bitcoin, ether, cash, and cash equivalents. In the event that any digital asset other than bitcoin and ether is included, or is eligible for inclusion, as a constituent in the Index,¹⁷ the Sponsor will transition the Fund from full replication to a representative sampling methodology, holding only bitcoin and

⁹ See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018). This proposal was subsequently disapproved by the Commission. See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018) (the “Winklevoss Order”). Prior orders from the Commission have pointed out that in every prior approval order for Commodity-Based Trust Shares, there has been a derivatives market that represents the regulated market of significant size, generally a Commodity Futures Trading Commission (the “CFTC”) regulated futures market. Further to this point, the Commission's prior orders have noted that the spot commodities and currency markets for which it has previously approved spot ETPs are generally unregulated and that the Commission relied on the underlying futures market as the regulated market of significant size that formed the basis for approving the series of Currency and Commodity-Based Trust Shares, including gold, silver, platinum, palladium, copper, and other commodities and currencies. The Commission specifically noted in the Winklevoss Order that the approval order issued related to the first spot gold ETP “was based on an assumption that the currency market and the spot gold market were largely unregulated.” See Winklevoss Order at 37592. As such, the regulated market of significant size test does not require that the spot bitcoin and ether markets be regulated in order for the Commission to approve this proposal, and precedent makes clear that an underlying market for a spot commodity or currency being a regulated market would actually be an exception to the norm. These largely unregulated currency and commodity markets do not provide the same protections as the markets that are subject to the Commission's oversight, but the Commission has consistently looked to surveillance sharing agreements with the underlying futures market in order to determine whether such products were consistent with the Act.

¹⁰ See Winklevoss Order, 83 FR at 37580.

¹¹ For a list of the current members and affiliate members of ISG, see www.isgportal.com.

¹² See Exchange Act Release No. 99306 (January 10, 2024), 89 FR 3008 (January 17, 2024) (Self-Regulatory Organizations; NYSE Arca, Inc.; The Nasdaq Stock Market LLC; Cboe BZX Exchange, Inc.; Order Granting Accelerated Approval of Proposed Rule Changes, as Modified by Amendments Thereto, To List and Trade Bitcoin-Based Commodity-Based Trust Shares and Trust Units) (the “Spot Bitcoin ETP Approval Order”).

¹³ See Exchange Act Release No. 100224 (May 23, 2024), 89 FR 46937 (May 30, 2024) (Self-Regulatory Organizations; NYSE Arca, Inc.; The Nasdaq Stock Market LLC; Cboe BZX Exchange, Inc.; Order Granting Accelerated Approval of Proposed Rule Changes, as Modified by Amendments Thereto, To List and Trade Shares of Ether-Based Exchange-Traded Products) (the “Spot Ether ETP Approval Order”).

¹⁴ See the Spot Bitcoin ETP Approval Order at 3011–3012.

¹⁵ See Securities Exchange Act No. 82448 (January 5, 2018) 83 FR 1428 (January 11, 2018) (SR–NYSEArca–2017–131) (NYSE Arca, Inc.; Notice of Filing of Amendment No. 2 and Order Approving on an Accelerated Basis a Proposed Rule Change, as Modified by Amendment No. 2, To List and Trade Shares of the Sprott Physical Gold and Silver Trust Under NYSE Arca Rule 8.201–E).

¹⁶ Cash equivalents are short-term instruments with maturities of less than 3 months.

¹⁷ The “Index” refers to the CF Institutional Digital Asset Index—US–Settlement Price.

ether in the same proportions determined by the Index, until such time that the Fund and the Exchange receive the necessary regulatory approval to permit the Fund to hold such other digital asset.

According to the Registration Statement, the Trust is neither an investment company registered under the 1940 Act,¹⁸ nor a commodity pool for purposes of the Commodity Exchange Act (“CEA”), and neither the Trust, the Fund nor the Sponsor is subject to regulation as a commodity pool operator or a commodity trading adviser in connection with the Shares.

Neither the Trust or the Fund, nor the Sponsor, nor the Custodian, nor any other person associated with the Trust or Fund will, directly or indirectly, engage in action where any portion of the Fund’s ether becomes subject to the Ethereum proof-of-stake validation or is used to earn additional ether or generate income or other earnings. The Fund will not acquire and will disclaim any incidental right (“IR”) or IR asset received, for example as a result of forks or airdrops, and such assets will not be taken into account for purposes of determining the Fund’s net asset value (“NAV”).

When the Fund sells or redeems its Shares, it will do so in cash transactions in large blocks of 50,000 Shares (a “Creation Basket”) at the Fund’s NAV. For creations, authorized participants will deliver, or facilitate the delivery of, cash to the Fund’s account with the Cash Custodian in exchange for Shares. Upon receipt of an approved creation order, the Sponsor, on behalf of the Fund, will submit an order to buy the amount of bitcoin and ether represented by a Creation Basket. Based off bitcoin/ether executions, the Cash Custodian will request the required cash from the authorized participant. Following receipt by the Cash Custodian of the cash from an authorized participant, the Sponsor, on behalf of the Fund, will approve an order with one or more previously onboarded trading partners to purchase the amount of bitcoin and ether represented by the Creation Basket.¹⁹ Authorized participants may then offer Shares to the public at prices that depend on various factors, including the supply and demand for Shares, the value of the Fund’s assets,

and market conditions at the time of a transaction. Shareholders who buy or sell Shares during the day from their broker may do so at a premium or discount relative to the NAV of the Shares of the Fund.

Investment Objective

According to the Registration Statement and as further described below, the investment objective of the Fund is for changes in the Shares’ NAV to reflect the daily changes of the Index, less expenses and liabilities of the Fund. The Fund will seek to achieve its investment objective by investing in bitcoin and ether in approximately the same weights as they represent in the Index, which is a free float-adjusted market capitalization weighted index of liquid digital assets that are recognized as being in conformance with prevailing markets regulations of major financial jurisdictions as determined by CF Benchmarks Ltd. (the “Index Provider”).

In seeking to achieve its investment objective, the Fund will hold only bitcoin, ether, cash, and cash equivalents. The price of bitcoin and ether within the Index is based on the CME CF Bitcoin Reference Rate—New York Variant for the Bitcoin—U.S. Dollar trading pair (the “CF Bitcoin Reference Rate”) and the CME CF Ether—U.S. Dollar trading pair (the “CF Ether Reference Rate”, and together with the CF Bitcoin Reference Rate, the “CF Reference Rates”).

If a CF Reference Rate is not available or the Sponsor determines, in its sole discretion, that a CF Reference Rate should not be used, the Fund’s holdings may be fair valued in accordance with the policy approved by the Sponsor.²⁰

The Index

As described in the Registration Statement, the Fund generally seeks to reflect the price of the digital assets included in the Index. Currently, the Index’s only constituent digital assets are bitcoin and ether. The Fund’s investment objective is for changes in the Shares’ NAV to reflect the daily changes of the Index, less expenses and liabilities of the Fund. The Fund will seek to achieve its investment objective by investing in bitcoin and ether in approximately the same weights as they represent in the Index.

The Index is owned, administered and calculated by the Index Provider. The Index is derived from a rules-based methodology and related ground rules

(together, the “Index Rules”), which are overseen by the Index Provider. Eligible constituent digital assets are screened, including for their liquidity, asset turnover and ability to be stored in custody by third parties that have regulatory approval to provide services for the safe keeping of digital assets on behalf of investors. To be eligible for inclusion in the Index, the digital asset (1) must be listed on two or more eligible constituent exchanges as determined by the Index Provider and (2) must be supported by one or more eligible third-party custodians as determined by the Index Provider. Digital assets that are pegged to the value of any asset, including but not limited to stablecoins, are not eligible for inclusion in the Index. Only markets and trading pairs where a digital asset is listed as either the base asset or quote asset against the U.S. Dollar will be included in calculations for purposes of the liquidity screen. The Index Provider further reserves the right to exclude a digital asset based on one or more factors. The resultant digital assets are deemed to be the investible universe (“Investible Universe”) of digital assets that are eligible for inclusion in the Index. Digital assets within the 95th percentile of the free float-adjusted market capitalization of the Investible Universe that are determined by the Index Provider as being in conformance with prevailing capital markets regulations of major financial jurisdictions (including that the SEC has approved or permitted an exchange-traded product/fund registered under the Securities Act of 1933 holding such digital asset to list and launch) and that meet certain minimum liquidity, turnover, and full market capitalization ratios as determined by the Index Provider pursuant to the Index Rules are generally included as constituents in the Index.

The free float supply of each digital asset is determined by the Index Provider in accordance with the Index Rules, with different calculations applying depending on whether the digital assets is determined to be “coin-centric” (such as bitcoin) or “account-centric” (such as ether). The Index is rebalanced and reconstituted quarterly. The Fund will be reconstituted and rebalanced in accordance with the Index.

The price of bitcoin and ether within the Index is based on the respective CF Reference Rate (*i.e.*, the CF Bitcoin Reference Rate and CF Ether Reference Rate). See the below section titled “Net Asset Value” for information on how the CF Reference Rates are calculated.

¹⁸ 15 U.S.C. 80a–1.

¹⁹ For redemptions, the process will occur in the reverse order. Upon receipt of an approved redemption order, the Sponsor, on behalf of the Fund, will submit an order to sell the amount of bitcoin and ether represented by a Creation Basket and the cash proceeds will be remitted to the authorized participant when the large block of Shares is received by the Transfer Agent.

²⁰ Any alternative method will only be employed on an ad hoc basis. Any permanent change to the calculation of the NAV would require a proposed rule change under Rule 19b–4.

In addition, the Sponsor notes that an oversight function is implemented by the Index Provider in seeking to ensure that the CF Reference Rates are administered through codified policies for index integrity. CF Reference Rate data and the description of the CF Reference Rates are based on information made publicly available by the Index Provider on its website at <https://www.cfbenchmarks.com>.

Net Asset Value

NAV means the total assets of the Fund (which includes bitcoin, ether, cash and cash equivalents) less total liabilities of the Fund. The Administrator will determine the NAV of the Fund on each day that the Exchange is open for regular trading, as promptly as practical after 4:00 p.m. ET. The NAV of the Fund is the aggregate value of the Fund's assets less its estimated accrued but unpaid liabilities (which include accrued expenses). In determining the Fund's NAV, the Administrator values the bitcoin and ether held by the Fund based on the CF Reference Rates as of 4:00 p.m. ET. The Administrator also determines the NAV per Share.

The NAV for the Fund will be calculated by the Administrator once a day and will be disseminated daily to all market participants at the same time.

If one or both of the CF Reference Rates is not available or the Sponsor determines, in its sole discretion, that the CF Bitcoin Reference Rate or the CF Ether Reference Rate should not be used, the Fund's holdings may be fair valued in accordance with the policy approved by the Sponsor.

On each business day, as soon as practicable after 4:00 p.m. ET, the Administrator evaluates the bitcoin and ether held by the Fund as reflected by the CF Reference Rates and determines the NAV of the Fund.

The CF Reference Rates serve as once-a-day benchmark rates of the U.S. dollar price of ether (USD/ETH) and bitcoin (USD/BTC), calculated as of 4:00 p.m. ET. The CF Reference Rates aggregate the trade flow of several ether and bitcoin trading platforms, during an observation window between 3:00 p.m. and 4:00 p.m. ET into the U.S. dollar price of one bitcoin and ether at 4:00 p.m. ET. Specifically, the CF Reference Rates are calculated based on the "Relevant Transactions" (as defined below) of all of its constituent bitcoin and ether trading platforms, which are currently Coinbase, Bitstamp, Kraken, itBit, LMAX Digital and Gemini (the "Constituent Platforms"), as follows:

- All Relevant Transactions are added to a joint list, recording the time of

execution, trade price and size for each transaction.

- The list is partitioned by timestamp into 12 equally-sized time intervals of 5 (five) minute length.

- For each partition separately, the volume-weighted median trade price is calculated from the trade prices and sizes of all Relevant Transactions, *i.e.*, across all Constituent Platforms. A volume-weighted median differs from a standard median in that a weighting factor, in this case trade size, is factored into the calculation.

- The CF Reference Rate is then determined by the equally-weighted average of the volume medians of all partitions.

The Constituent Platforms may change from time to time. The CF Reference Rates do not include any futures prices in its methodology. A "Relevant Transaction" is any cryptocurrency versus U.S. dollar spot trade that occurs during the observation window between 3:00 p.m. and 4:00 p.m. ET on a Constituent Platform in the XBT/USD and ETH/USD pairs that are reported and disseminated by a Constituent Platform through its publicly available Application Programming Interface ("API") and observed by the Index Provider.

The Sponsor believes that the use of the CF Reference Rates is reflective of a reasonable valuation of the average spot price of ether and bitcoin and that resistance to manipulation is a priority aim of its design methodology. The methodology: (i) takes an observation period and divides it into equal partitions of time; (ii) then calculates the volume-weighted median of all transactions within each partition; and (iii) the value is determined from the arithmetic mean of the volume-weighted medians, equally weighted. By employing the foregoing steps, the CF Reference Rates thereby seek to ensure that transactions in ether and bitcoin conducted at outlying prices do not have an undue effect on the value of the CF Reference Rates, large trades or clusters of trades transacted over a short period of time will not have an undue influence on the CF Reference Rates, and the effect of large trades at prices that deviate from the prevailing price are mitigated from having an undue influence on the CF Reference Rates.

Availability of Information

The website for the Fund, which will be publicly accessible at no charge, will contain the following information: (a) the current NAV per Share daily and the prior business day's NAV per Share and the reported BZX Official Closing

Price;²¹ (b) the BZX Official Closing Price in relation to the NAV per Share as of the time the NAV is calculated and a calculation of the premium or discount of such price against such NAV per Share; (c) data in chart form displaying the frequency distribution of discounts and premiums of the BZX Official Closing Price against the NAV per Share, within appropriate ranges for each of the four previous calendar quarters (or for the life of the Fund, if shorter); (d) the prospectus; and (e) other applicable quantitative information. The aforementioned information will be published as of the close of business available on the Fund's website at <https://www.franklinintempleton.com/investments/options/exchange-traded-funds>, or any successor thereto. The Fund will also disseminate its holdings on a daily basis on its website.

The Intraday Indicative Value ("IIV") will be calculated by using the prior day's closing NAV per Share as a base and updating that value during Regular Trading Hours²² to reflect changes in the value of the Fund's bitcoin and ether holdings during the trading day, which are based on CME CF Ether-Dollar Real Time Index and CME CF Bitcoin Real Time Index. The IIV disseminated during Regular Trading Hours should not be viewed as an actual real-time update of the NAV, which will be calculated only once at the end of each trading day. The IIV will be widely disseminated on a per Share basis every 15 seconds during the Exchange's Regular Trading Hours through the facilities of the consolidated tape association (CTA) and Consolidated Quotation System (CQS) high speed lines. In addition, the IIV will be available through online information services, such as Bloomberg and Reuters.

The price of bitcoin and ether will be made available by one or more major market data vendors, updated at least every 15 seconds during Regular Trading Hours.

As noted above, each CF Reference Rate is calculated daily and aggregates the notional value of trading activity across major spot trading platforms. CF Reference Rate data, the CF Reference Rate value, and the description of the CF Reference Rate are based on information made publicly available by the Index Provider on its website at <https://www.cfbenchmarks.com>.

²¹ As defined in Rule 11.23(a)(3), the term "BZX Official Closing Price" shall mean the price disseminated to the consolidated tape as the market center closing trade.

²² Regular Trading Hours is the time between 9:30 a.m. and 4:00 p.m. Eastern Time.

Quotation and last sale information for bitcoin and ether is widely disseminated through a variety of major market data vendors, including Bloomberg and Reuters. Information relating to trading, including price and volume information, in bitcoin and ether are available from major market data vendors and from the trading platforms on which ether and bitcoin are traded. Depth of book information is also available from ether and bitcoin trading platforms. The normal trading hours for ether and bitcoin trading platforms are 24 hours per day, 365 days per year.

Information regarding market price and trading volume of the Shares will be continually available on a real-time basis throughout the day on brokers' computer screens and other electronic services. Information regarding the previous day's BZX Official Closing Price and trading volume information for the Shares will be published daily in the financial section of newspapers. Quotation and last-sale information regarding the Shares will be disseminated through the facilities of the CTA.

The Custodian

The Custodian carefully considers the design of the physical, operational and cryptographic systems for secure storage of the Fund's private keys in an effort to lower the risk of loss or theft. The Custodian utilizes a variety of security measures to ensure that private keys necessary to transfer digital assets remain uncompromised and that the Fund maintains exclusive ownership of its assets. The Custodian will keep the private keys associated with the Fund's bitcoin and ether in "cold storage"²³ (the "Cold Vault Balance"). The hardware, software, systems, and procedures of the ether Custodian may not be available or cost-effective for many investors to access directly. Only specific individuals are authorized to participate in the custody process, and no individual acting alone will be able to access or use any of the private keys. In addition, no combination of the executive officers of the Sponsor, acting alone or together, will be able to access

or use any of the private keys that hold the Fund's ether and bitcoin.

Creation and Redemption of Shares

When the Fund sells or redeems its Shares, it will do so in cash transactions in blocks of Shares (*e.g.*, a Creation Basket) that are based on the quantity of bitcoin and ether attributable to each Share of the Fund at the NAV. According to the Registration Statement, on any business day, an authorized participant may place an order to create one or more Creation Baskets. Purchase orders for cash transaction Creation Baskets must be placed by 2:00 p.m. Eastern Time, or the close of regular trading on the Exchange, whichever is earlier. The day on which an order is received is considered the purchase order date. The total deposit of cash required is based on the combined NAV of the number of Shares included in the Creation Baskets being created determined as of 4:00 p.m. ET on the date the order to purchase is properly received. The Administrator determines the quantity of bitcoin and ether associated with a Creation Basket for a given day by dividing the number of bitcoin and ether held by the Fund as of the opening of business on that business day, adjusted for the amount of bitcoin and ether constituting estimated accrued but unpaid fees and expenses of the Fund as of the opening of business on that business day, by the quotient of the number of Shares outstanding at the opening of business divided by the number of Shares in a Creation Basket. The procedures by which an authorized participant can redeem one or more Creation Baskets mirror the procedures for the creation of Creation Baskets.

The authorized participants will deliver only cash to create Shares and will receive only cash when redeeming Shares. Further, authorized participants will not directly or indirectly purchase, hold, deliver, or receive bitcoin or ether as part of the creation or redemption process or otherwise direct the Fund or a third-party with respect to purchasing, holding, delivering, or receiving bitcoin or ether as part of the creation or redemption process.

The Fund will create Shares by receiving ether or bitcoin from a third-party that is not the authorized participant and the Fund—not the authorized participant—is responsible for selecting the third-party to deliver the ether and bitcoin. Further, the third-party will not be acting as an agent of the authorized participant with respect to the delivery of the ether and bitcoin to the Fund or acting at the direction of the authorized participant with respect to the delivery of the bitcoin and ether

to the Fund. The Fund will redeem Shares by delivering bitcoin and ether to a third-party that is not the authorized participant and the Fund—not the authorized participant—is responsible for selecting the third-party to receive the ether and bitcoin. Further, the third-party will not be acting as an agent of the authorized participant with respect to the receipt of the ether and bitcoin from the Fund or acting at the direction of the authorized participant with respect to the receipt of the ether and bitcoin from the Fund.

The Sponsor (including its delegates) will maintain ownership and control of the Fund's ether and bitcoin in a manner consistent with good delivery requirements for spot commodity transactions.

Rule 14.11(e)(4)—Commodity-Based Trust Shares

The Shares will be subject to BZX Rule 14.11(e)(4), which sets forth the initial and continued listing criteria applicable to Commodity-Based Trust Shares. The Exchange represents that, for initial and continued listing, the Fund must be in compliance with Rule 10A-3 under the Act. A minimum of 100,000 Shares will be outstanding at the commencement of listing on the Exchange. The Exchange will obtain a representation that the NAV will be calculated daily and that the NAV and information about the assets of the Fund will be made available to all market participants at the same time. The Exchange notes that the Shares will meet the definition of Rule 14.11(e)(4)(C)(i) except that the Fund will hold two commodities (*i.e.*, bitcoin and ether) rather than a single commodity in addition to cash and cash equivalents. Specifically, the Shares will be: (a) issued by a trust that holds (1) two specified commodities²⁴ deposited with the trust, or (2) two specified commodities and, in addition to such specified commodities, cash; (b) issued by such trust in a specified aggregate minimum number in return for a deposit of a quantity of the underlying commodities and/or cash; and (c) when aggregated in the same specified minimum number, may be redeemed at a holder's request by such trust which will deliver to the redeeming holder the quantity of the underlying commodities and/or cash. The Exchange notes that the Commission has previously approved the listing and trading of series of

²³ The term "cold storage" refers to a safeguarding method by which the private keys corresponding to ether stored on a digital wallet are removed from any computers actively connected to the internet. Cold storage of private keys may involve keeping such wallet on a non-networked computer or electronic device or storing the public key and private keys relating to the digital wallet on a storage device (for example, a USB thumb drive) or printed medium (for example, papyrus or paper) and deleting the digital wallet from all computers.

²⁴ For purposes of Rule 14.11(e)(4), the term commodity takes on the definition of the term as provided in the Commodity Exchange Act.

Commodity-Based Trust Shares that hold more than one commodity.²⁵

Upon termination of the Fund, the Shares will be removed from listing. The Trustee is a trust company having substantial capital and surplus and the experience and facilities for handling corporate trust business, as required under Rule 14.11(e)(4)(E)(iv)(a) and that no change will be made to the trustee without prior notice to and approval of the Exchange. The Exchange also notes that, pursuant to Rule 14.11(e)(4)(F), neither the Exchange nor any agent of the Exchange shall have any liability for damages, claims, losses or expenses caused by any errors, omissions or delays in calculating or disseminating any underlying commodity value, the current value of the underlying commodity required to be deposited to the Fund in connection with issuance of Commodity-Based Trust Shares; resulting from any negligent act or omission by the Exchange, or any agent of the Exchange, or any act, condition or cause beyond the reasonable control of the Exchange, its agent, including, but not limited to, an act of God; fire; flood; extraordinary weather conditions; war; insurrection; riot; strike; accident; action of government; communications or power failure; equipment or software malfunction; or any error, omission or delay in the reports of transactions in an underlying commodity. Finally, as required in Rule 14.11(e)(4)(G), the Exchange notes that any registered market maker ("Market Maker") in the Shares must file with the Exchange in a manner prescribed by the Exchange and keep current a list identifying all accounts for trading in an underlying commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, which the registered Market Maker may have or over which it may exercise investment discretion. No registered Market Maker shall trade in an underlying commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, in an account in which a registered Market Maker, directly or indirectly, controls trading activities, or has a direct interest in the profits or losses thereof, which has not been reported to the Exchange as required by this Rule. In addition to the existing obligations under Exchange

rules regarding the production of books and records (see, e.g., Rule 4.2), the registered Market Maker in Commodity-Based Trust Shares shall make available to the Exchange such books, records or other information pertaining to transactions by such entity or registered or non-registered employee affiliated with such entity for its or their own accounts for trading the underlying physical commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, as may be requested by the Exchange.

The Exchange is able to obtain information regarding trading in the Shares and the underlying ether and bitcoin, CME Ether Futures and CME Bitcoin Futures, options on CME Ether Futures and CME Bitcoin Futures, or any other bitcoin or ether derivative through members acting as registered Market Makers, in connection with their proprietary or customer trades.

As a general matter, the Exchange has regulatory jurisdiction over its Members and their associated persons, which include any person or entity controlling a Member. To the extent the Exchange may be found to lack jurisdiction over a subsidiary or affiliate of a Member that does business only in commodities or futures contracts, the Exchange could obtain information regarding the activities of such subsidiary or affiliate through surveillance sharing agreements with regulatory organizations of which such subsidiary or affiliate is a member.

Trading Halts

With respect to trading halts, the Exchange may consider all relevant factors in exercising its discretion to halt or suspend trading in the Shares. The Exchange will halt trading in the Shares under the conditions specified in BZX Rule 11.18. Trading may be halted because of market conditions or for reasons that, in the view of the Exchange, make trading in the Shares inadvisable. These may include: (1) the extent to which trading is not occurring in the bitcoin or ether underlying the Shares; or (2) whether other unusual conditions or circumstances detrimental to the maintenance of a fair and orderly market are present. Trading in the Shares also will be subject to Rule 14.11(e)(4)(E)(ii), which sets forth circumstances under which trading in the Shares may be halted.

If the IIV or the value of the Index is not being disseminated as required, the Exchange may halt trading during the day in which the interruption to the dissemination of the IIV or the value of the Index occurs. If the interruption to the dissemination of the IIV or the value

of the Index persists past the trading day in which it occurred, the Exchange will halt trading no later than the beginning of the trading day following the interruption.

In addition, if the Exchange becomes aware that the NAV with respect to the Shares is not disseminated to all market participants at the same time, it will halt trading in the Shares until such time as the NAV is available to all market participants.

Trading Rules

The Exchange deems the Shares to be equity securities, thus rendering trading in the Shares subject to the Exchange's existing rules governing the trading of equity securities. BZX will allow trading in the Shares during all trading sessions on the Exchange. The Exchange has appropriate rules to facilitate transactions in the Shares during all trading sessions. As provided in BZX Rule 11.11(a) the minimum price variation for quoting and entry of orders in securities traded on the Exchange is \$0.01 where the price is greater than \$1.00 per share or \$0.0001 where the price is less than \$1.00 per share. The Shares of the Fund will conform to the initial and continued listing criteria set forth in BZX Rule 14.11(e)(4).

Surveillance

The Exchange represents that its surveillance procedures are adequate to properly monitor the trading of the Shares on the Exchange during all trading sessions and to deter and detect violations of Exchange rules and the applicable federal securities laws. Trading of the Shares through the Exchange will be subject to the Exchange's surveillance procedures for derivative products, including Commodity-Based Trust Shares. FINRA conducts certain cross-market surveillances on behalf of the Exchange pursuant to a regulatory services agreement. The Exchange is responsible for FINRA's performance under this regulatory services agreement.

The Exchange or FINRA, on behalf of the Exchange, or both, will communicate as needed regarding trading in the Shares, CME Ether Futures and CME Bitcoin Futures, or any other bitcoin or ether derivative with other markets and other entities that are members of the ISG, and the Exchange, or FINRA, on behalf of the Exchange, or both, may obtain trading information regarding trading in the Shares, CME Ether Futures and CME Bitcoin Futures, or any other ether or bitcoin derivative from such markets

²⁵ See Securities Exchange Act No. 82448 (January 5, 2018) 83 FR 1428 (January 11, 2018) (SR-NYSEArca-2017-131) (NYSE Arca, Inc.; Notice of Filing of Amendment No. 2 and Order Approving on an Accelerated Basis a Proposed Rule Change, as Modified by Amendment No. 2, To List and Trade Shares of the Sprott Physical Gold and Silver Trust Under NYSE Arca Rule 8.201-E).

and other entities.²⁶ The Exchange may obtain information regarding trading in the Shares, CME Ether Futures and CME Bitcoin Futures, or any other ether or bitcoin derivative via ISG, from other exchanges who are members or affiliates of the ISG, or with which the Exchange has entered into a comprehensive surveillance sharing agreement.

In addition, the Exchange also has a general policy prohibiting the distribution of material, non-public information by its employees.

The Sponsor has represented to the Exchange that it will advise the Exchange of any failure by the Fund or the Shares to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Exchange Act, the Exchange will surveil for compliance with the continued listing requirements. If the Fund or the Shares are not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under Exchange Rule 14.12.

Information Circular

Prior to the commencement of trading, the Exchange will inform its members in an Information Circular of the special characteristics and risks associated with trading the Shares. Specifically, the Information Circular will discuss the following: (i) the procedures for the creation and redemption of Creation Baskets (and that the Shares are not individually redeemable); (ii) BZX Rule 3.7, which imposes suitability obligations on Exchange members with respect to recommending transactions in the Shares to customers; (iii) how information regarding the IIV and the Fund's NAV are disseminated; (iv) the risks involved in trading the Shares outside of Regular Trading Hours when an updated IIV will not be calculated or publicly disseminated; (v) the requirement that members deliver a prospectus to investors purchasing newly issued Shares prior to or concurrently with the confirmation of a transaction; and (vi) trading information. The Information Circular will also reference the fact that there is no regulated source of last sale information regarding ether or bitcoin, that the Commission has no jurisdiction over the trading of ether or bitcoin as a commodity, and that the CFTC has regulatory jurisdiction over the trading of CME Ether Futures contracts and CME Bitcoin Futures contracts and

options on CME Ether Futures contracts and CME Bitcoin Futures contracts.

In addition, the Information Circular will advise members, prior to the commencement of trading, of the prospectus delivery requirements applicable to the Shares. Members purchasing the Shares for resale to investors will deliver a prospectus to such investors. The Information Circular will also discuss any exemptive, no-action and interpretive relief granted by the Commission from any rules under the Act.

2. Statutory Basis

The Exchange believes that the proposal is consistent with Section 6(b) of the Act²⁷ in general and Section 6(b)(5) of the Act²⁸ in particular in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system and, in general, to protect investors and the public interest.

The Commission has approved numerous series of Trust Issued Receipts,²⁹ including Commodity-Based Trust Shares,³⁰ to be listed on U.S. national securities exchanges. In order for any proposed rule change from an exchange to be approved, the Commission must determine that, among other things, the proposal is consistent with the requirements of Section 6(b)(5) of the Act, specifically including: (i) the requirement that a national securities exchange's rules are designed to prevent fraudulent and manipulative acts and practices; and (ii) the requirement that an exchange proposal be designed, in general, to protect investors and the public interest. The Exchange believes that this proposal is consistent with the requirements of Section 6(b)(5) of the Act.

The Commission has historically approved or disapproved exchange filings to list and trade series of Trust Issued Receipts, including spot-based Commodity-Based Trust Shares, on the basis of whether the listing exchange has in place a comprehensive surveillance sharing agreement with a regulated market of significant size related to the underlying commodity to

be held.³¹ The Commission has also consistently recognized, however, that this is not the exclusive means by which an ETP listing exchange can meet this statutory obligation.³² A listing exchange could, alternatively, demonstrate that "other means to prevent fraudulent and manipulative acts and practices will be sufficient" to justify dispensing with a surveillance-sharing agreement with a regulated market of significant size.

Both the Exchange and the CME are members of the ISG.³³ With this in mind, the CME Ether Futures market and the CME Bitcoin Futures market are the proper markets to consider in determining whether there is a related regulated market of significant size. Recently, the Commission issued orders granting approval for proposals to list Spot Bitcoin ETPs and Spot Ether ETPs. In the Spot Bitcoin ETP Approval Order, the Commission stated:

[B]ased on the record before the Commission and the improved quality of the correlation analysis in the record. . . the Commission is able to conclude that fraud or manipulation that impacts prices in spot bitcoin markets would likely similarly impact CME bitcoin futures prices. And because the CME's surveillance can assist in

³¹ See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018). This proposal was subsequently disapproved by the Commission. See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018) (the "Winklevoss Order"). Prior orders from the Commission have pointed out that in every prior approval order for Commodity-Based Trust Shares, there has been a derivatives market that represents the regulated market of significant size, generally a Commodity Futures Trading Commission (the "CFTC") regulated futures market. Further to this point, the Commission's prior orders have noted that the spot commodities and currency markets for which it has previously approved spot ETPs are generally unregulated and that the Commission relied on the underlying futures market as the regulated market of significant size that formed the basis for approving the series of Currency and Commodity-Based Trust Shares, including gold, silver, platinum, palladium, copper, and other commodities and currencies. The Commission specifically noted in the Winklevoss Order that the approval order issued related to the first spot gold ETP "was based on an assumption that the currency market and the spot gold market were largely unregulated." See Winklevoss Order at 37592. As such, the regulated market of significant size test does not require that the spot bitcoin and ether markets be regulated in order for the Commission to approve this proposal, and precedent makes clear that an underlying market for a spot commodity or currency being a regulated market would actually be an exception to the norm. These largely unregulated currency and commodity markets do not provide the same protections as the markets that are subject to the Commission's oversight, but the Commission has consistently looked to surveillance sharing agreements with the underlying futures market in order to determine whether such products were consistent with the Act.

³² See Winklevoss Order, 83 FR at 37580.

³³ For a list of the current members and affiliate members of ISG, see www.isgportal.com.

²⁶ For a list of the current members and affiliate members of ISG, see www.isgportal.com.

²⁷ 15 U.S.C. 78f.

²⁸ 15 U.S.C. 78f(b)(5).

²⁹ See Exchange Rule 14.11(f).

³⁰ Commodity-Based Trust Shares, as described in Exchange Rule 14.11(e)(4), are a type of Trust Issued Receipt.

detecting those impacts on CME bitcoin futures prices, the Exchanges' comprehensive surveillance-sharing agreement with the CME—a U.S. regulated market whose bitcoin futures market is consistently highly correlated to spot bitcoin, albeit not of "significant size" related to spot bitcoin—can be reasonably expected to assist in surveilling for fraudulent and manipulative acts and practices in the specific context of the [p]roposals.³⁴

In the Spot Ether ETP Approval Order the Commission also concluded that fraud or manipulation that impacts prices in spot ether markets would likely similarly impact CME Ether Futures prices. Further, for the same reasons that the CME's surveillance can assist in detecting those impacts on CME Ether Futures prices, the Exchange's comprehensive surveillance-sharing agreement with the CME can be reasonably expected to assist in surveilling for fraudulent and manipulative acts and practices in the specific context of the proposals.

In sum, in the Spot Bitcoin ETP Approval Order and Spot Ether ETP Approval Order the Commission established that the CME Bitcoin Futures market and CME Ether Futures market can reasonably be expected to assist for fraudulent and manipulative acts and practices. Further, the Commission determined that the listing exchanges demonstrated "other means to prevent fraudulent and manipulative acts and practices will be sufficient" to justify dispensing with a surveillance-sharing agreement with a regulated market of significant size.

The Exchange notes that the Commission has also previously approved the listing and trading of a series of Commodity-Based Trust Shares that, like the Fund, holds two commodities.³⁵ Given this and the above, the Exchange believes the Shares satisfy the requirements of Exchange Rule BZX Rule 14.11(e)(4) and thereby qualify for listing and trading on the Exchange.

Commodity-Based Trust Shares

The Exchange believes that the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that the Shares will be listed on the Exchange pursuant to the initial and continued listing criteria

in Exchange Rule 14.11(e)(4). The Exchange believes that its surveillance procedures are adequate to properly monitor the trading of the Shares on the Exchange during all trading sessions and to deter and detect violations of Exchange rules and the applicable federal securities laws. Trading of the Shares through the Exchange will be subject to the Exchange's surveillance procedures for derivative products, including Commodity-Based Trust Shares. The issuer has represented to the Exchange that it will advise the Exchange of any failure by the Fund or the Shares to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Exchange Act, the Exchange will surveil for compliance with the continued listing requirements. If the Fund or the Shares are not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under Exchange Rule 14.12. The Exchange may obtain information regarding trading in the Shares and listed ether or bitcoin derivatives via the ISG, from other exchanges who are members or affiliates of the ISG, or with which the Exchange has entered into a comprehensive surveillance sharing agreement.

Availability of Information

In addition to the price transparency of the Index, the Fund will provide information regarding the Fund's bitcoin and ether holdings as well as additional data regarding the Fund.

The website for the Fund, which will be publicly accessible at no charge, will contain the following information: (a) the current NAV per Share daily and the prior business day's NAV per Share and the reported BZX Official Closing Price;³⁶ (b) the BZX Official Closing Price in relation to the NAV per Share as of the time the NAV is calculated and a calculation of the premium or discount of such price against such NAV per Share; (c) data in chart form displaying the frequency distribution of discounts and premiums of the BZX Official Closing Price against the NAV per Share, within appropriate ranges for each of the four previous calendar quarters (or for the life of the Fund, if shorter); (d) the prospectus; and (e) other applicable quantitative information. The aforementioned information will be published as of the close of business available on the

Fund's website at <https://www.franklintempleton.com/investments/options/exchange-traded-funds>, or any successor thereto. The Fund will also disseminate its holdings on a daily basis on its website.

The IIV will be calculated by using the prior day's closing NAV per Share as a base and updating that value during Regular Trading Hours to reflect changes in the value of the Fund's bitcoin and ether holdings during the trading day, which are based on CME CF Ether-Dollar Real Time Index and CME CF Bitcoin Real Time Index. The IIV disseminated during Regular Trading Hours should not be viewed as an actual real-time update of the NAV, which will be calculated only once at the end of each trading day. The IIV will be widely disseminated on a per Share basis every 15 seconds during the Exchange's Regular Trading Hours through the facilities of the consolidated tape association (CTA) and Consolidated Quotation System (CQS) high speed lines. In addition, the IIV will be available through on-line information services such as Bloomberg and Reuters.

The price of bitcoin and ether will be made available by one or more major market data vendors, updated at least every 15 seconds during Regular Trading Hours.

As noted above, each CF Reference Rate is calculated daily and aggregates the notional value of trading activity across major spot trading platforms. CF Reference Rate data, the CF Reference Rate value, and the description of the CF Reference Rate are based on information made publicly available by the Index Provider on its website at <https://www.cfbenchmarks.com>.

Quotation and last sale information for ether and bitcoin is widely disseminated through a variety of major market data vendors, including Bloomberg and Reuters. Information relating to trading, including price and volume information, in bitcoin and ether are available from major market data vendors and from the trading platforms on which ether and bitcoin are traded. Depth of book information is also available from ether and bitcoin trading platforms. The normal trading hours for ether and bitcoin trading platforms are 24 hours per day, 365 days per year.

Information regarding market price and trading volume of the Shares will be continually available on a real-time basis throughout the day on brokers' computer screens and other electronic services. Information regarding the previous day's BZX Official Closing Price and trading volume information

³⁴ See the Spot Bitcoin ETP Approval Order at 3011–3012.

³⁵ See Securities Exchange Act No. 82448 (January 5, 2018) 83 FR 1428 (January 11, 2018) (SR–NYSEArca–2017–131) (NYSE Arca, Inc.; Notice of Filing of Amendment No. 2 and Order Approving on an Accelerated Basis a Proposed Rule Change, as Modified by Amendment No. 2, To List and Trade Shares of the Sprott Physical Gold and Silver Trust Under NYSE Arca Rule 8.201–E).

³⁶ As defined in Rule 11.23(a)(3), the term "BZX Official Closing Price" shall mean the price disseminated to the consolidated tape as the market center closing trade.

for the Shares will be published daily in the financial section of newspapers. Quotation and last-sale information regarding the Shares will be disseminated through the facilities of the CTA.

The proposed rule change is designed to perfect the mechanism of a free and open market, and, in general, to protect investors and the public interest in that it will facilitate the listing and trading of an additional type of exchange-traded product that will enhance competition among market participants, to the benefit of investors and the marketplace. As noted above, the Exchange has in place surveillance procedures relating to trading in the Shares and may obtain information via ISG from other exchanges that are members of ISG or with which the Exchange has entered into a surveillance sharing agreement. The Exchange or FINRA, on behalf of the Exchange, or both, will communicate as needed regarding trading in the Shares, CME Ether Futures and CME Bitcoin Futures, or any other bitcoin or ether derivative with other markets and other entities that are members of the ISG, and the Exchange, or FINRA, on behalf of the Exchange, or both, may obtain trading information regarding trading in the Shares, CME Ether Futures and CME Bitcoin Futures, or any other ether or bitcoin derivative from such markets and other entities.³⁷ The Exchange may obtain information regarding trading in the Shares, CME Ether Futures and CME Bitcoin Futures, or any other ether or bitcoin derivative via ISG, from other exchanges who are members or affiliates of the ISG, or with which the Exchange has entered into a comprehensive surveillance sharing agreement.

For the above reasons, the Exchange believes that the proposed rule change is consistent with the requirements of Section 6(b)(5) of the Act.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange notes that the proposed rule change, rather will facilitate the listing and trading of an additional exchange-traded product that will enhance competition among both market participants and listing venues, to the benefit of investors and the marketplace.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange neither solicited nor received comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the Exchange consents, the Commission will:

- A. by order approve or disapprove such proposed rule change, or
- B. institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (<https://www.sec.gov/rules/sro.shtml>); or
- Send an email to rule-comments@sec.gov. Please include file number SR-CboeBZX-2024-091 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090. All submissions should refer to file number SR-CboeBZX-2024-091. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (<https://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the

provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR-CboeBZX-2024-091 and should be submitted on or before October 29, 2024.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.³⁸

Vanessa A. Countryman,
Secretary.

[FR Doc. 2024-23167 Filed 10-7-24; 8:45 am]

BILLING CODE 8011-01-P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-101231; File No. SR-IEX-2024-20]

Self-Regulatory Organizations; Investors Exchange LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Amend Rule 11.330 To Adopt a New Market Data Product To Be Known as DEEP+

October 2, 2024.

Pursuant to Section 19(b)(1) ¹ of the Securities Exchange Act of 1934 (the "Act") ² and Rule 19b-4 thereunder,³ notice is hereby given that on September 19, 2024, the Investors Exchange LLC ("IEX" or the "Exchange") filed with the Securities and Exchange Commission (the "Commission") the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

³⁸ 17 CFR 200.30-3(a)(12).

¹ 15 U.S.C. 78s(b)(1).

² 15 U.S.C. 78a.

³ 17 CFR 240.19b-4.

³⁷ For a list of the current members and affiliate members of ISG, see www.isgportal.com.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Pursuant to the provisions of Section 19(b)(1) under the Act,⁴ and Rule 19b-4 thereunder,⁵ the Exchange with the Commission a proposed rule change to amend Rule 11.330 to adopt a new market data product to be known as DEEP+, which is an uncompressed data feed that provides order-by-order depth of book quotations for all displayed orders for securities traded on IEX, and execution information (*i.e.*, last sale information) for executions on the Exchange. The Exchange has designated this proposal as non-controversial and provided the Commission with the notice required by Rule 19b-4(f)(6)(iii) under the Act.⁶ IEX also proposes to update its Fee Schedule to reflect that DEEP+ will be offered free of charge for an initial incentive period.

The text of the proposed rule change is available at the Exchange's website at www.iextrading.com, at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend IEX Rule 11.330(a) to add a new subparagraph (3) that describes a new market data product to be known as DEEP+, and to renumber the current subparagraphs (3) and (4) to be subparagraphs (4) and (5). The Exchange also proposes to make a conforming edit to IEX Rule 11.232(f), and to update its Fee Schedule⁷ to reflect that IEX will be

offering DEEP+ free of charge for an initial incentive period.

Currently, the Exchange offers two Real-Time⁸ market data products: TOPS⁹, an uncompressed data feed that provides aggregated top of book quotations for all displayed orders resting on the Order Book and execution information (*i.e.*, last sale information) for executions on the Exchange; and DEEP,¹⁰ an uncompressed data feed that provides aggregated depth of book quotations for all displayed orders resting on the Order Book at each price level, and execution information (*i.e.*, last sale information) for executions on the Exchange.¹¹ The TOPS and DEEP feeds also include IEX's "Retail Liquidity Identifier"¹², which is disseminated by IEX to TOPS, DEEP, and the appropriate securities information processor ("SIP"), when IEX's Order Book has at least one round lot of aggregated Retail Liquidity Provider¹³ order interest ("RLP Interest")¹⁴ for a particular security, provided that the RLP Interest is resting at the Midpoint Price¹⁵ and priced at least \$0.001 better than the NBB¹⁶ or NBO¹⁷. The Retail Liquidity Identifier¹⁸ provides the symbol and side of the RLP Interest, but does not include its price or size.¹⁹

Based on informal discussion with market participants, the Exchange has determined that there is demand for an order-by-order depth of book feed offering for displayed orders, in addition to the aggregated depth of book data offered by DEEP. Accordingly, the Exchange proposes to amend Rule 11.330(a)(3) to offer the new DEEP+ market data product.

As proposed, DEEP+ will disseminate, on a Real-Time basis, order-by-order information for all displayed orders resting on the Order Book for securities traded on IEX and execution information (*i.e.*, last sale information) for executions on the Exchange. DEEP+

will provide details on each displayed order resting on the Order Book including OrderID, symbol, side, timestamp associated with the message, price, and size, and will update each order's data when there are amendments, cancels, and executions.²⁰

Like TOPS and DEEP, DEEP+ will also disseminate a Retail Liquidity Identifier for each security for which IEX has the requisite RLP Interest. Therefore, IEX proposes to amend IEX Rule 11.232(f) to reflect that the Retail Liquidity Indicator will be disseminated to DEEP+, in addition to being disseminated to TOPS, DEEP, and the SIPs. IEX notes that this order-specific information, including the disseminated Retail Liquidity Identifier,²¹ is functionally equivalent to the order-specific information provided by other exchanges' order-by-order feeds.²²

For an initial incentive period, DEEP+ will be provided free of charge, and Data Subscribers²³ may redistribute DEEP+ data, whether on a Real-Time or Delayed²⁴ basis, free of charge (for an initial incentive period), subject to the terms of the IEX Data Subscriber Agreement and IEX's Market Data Policies.²⁵

Additionally, IEX proposes to amend the Fee Schedule to insert two new rows in the table of Market Data Fees reflecting that DEEP+ initially will be offered for free (on a Real-Time or

²⁰ IEX notes that Data Subscribers will be able to use DEEP+ to derive IEX's top of book quotations for internal use from the order-by-order data, as set forth in IEX's Market Data Policies (available at <https://www.iexexchange.io/resources/trading/market-data>).

²¹ See, e.g., Cboe BYX Rule 11.22(k) (referencing the inclusion of Cboe BYX's retail liquidity identifier in the BYX Summary Depth data feed).

²² For example, Cboe BYX provides an order-by-order depth of book with the equivalent data. See Cboe US Equities/Options Multicast Depth of Book (PITCH) Specification, available at https://cdn.cboe.com/resources/membership/Cboe_US_Equities_FIX_Specification.pdf.

²³ "Data Subscriber" means any natural person or entity that receives Real-Time IEX market data either directly from the Exchange or from another non-affiliate Data Subscriber. A Data Subscriber must enter into a Data Subscriber Agreement with IEX in order to receive Real-Time IEX market data. A natural person or entity that receives Real-Time IEX market data from an affiliated Data Subscriber is subject to the Data Subscriber Agreement of such affiliated Data Subscriber. See IEX Fee Schedule.

²⁴ "Delayed" means IEX market data that is accessed, used, or distributed at least fifteen (15) milliseconds after it was made available by the Exchange. A Data Subscriber may redistribute Real-Time IEX market data that it receives from the Exchange on a Delayed basis to a natural person or entity. In addition, a recipient of Delayed IEX market data may further redistribute such Delayed IEX market data to a natural person or entity. See IEX Fee Schedule.

²⁵ Available at <https://www.iexexchange.io/resources/trading/market-data>.

⁸ "Real-Time" means IEX market data that is accessed, used, or distributed less than fifteen (15) milliseconds after it was made available by the Exchange. IEX provides only Real-Time IEX market data to Data Subscribers.

⁹ See IEX Rule 11.330(a)(1).

¹⁰ See IEX Rule 11.330(a)(2).

¹¹ TOPS and DEEP would also provide IEX Auction Information for any IEX-listed securities. Currently, IEX is not a listing exchange, and such information is only provided with respect to auction test symbols.

¹² See IEX Rule 11.232(f).

¹³ See IEX Rule 11.190(b)(14).

¹⁴ See IEX Rule 11.232(f).

¹⁵ See IEX Rule 1.160(t).

¹⁶ See IEX Rule 1.160(u).

¹⁷ See IEX Rule 1.160(u).

¹⁸ See IEX Rule 11.232(f).

¹⁹ *Id.*

⁴ 15 U.S.C. 78s(b)(1).

⁵ 17 CFR 240.19b-4.

⁶ 17 CFR 240.19b-4(f)(6)(iii).

⁷ See IEX Fee Schedule, available at <https://www.iexexchange.io/resources/trading/fee-schedule>.

Delayed basis).²⁶ IEX also proposes to delete the two references to footnote 3 in the Market Data Fees table (in the rows for Real-Time DEEP and TOPS), and to amend the footnote's language so that it is applicable to DEEP+. Footnote 3 currently reads "These fees will be operative beginning July 1, 2022," which was the date IEX began charging to distribute TOPS and DEEP in Real-Time. Because that date applied to the initiation of fees for TOPS and DEEP in Real-Time (and has passed), IEX proposes to amend the footnote to apply to DEEP+ and read: "These fees will be operative when the product is launched. IEX will announce the launch date by Trader Alert at least 10 business days in advance of the product launch" and to apply footnote 3 to the two new rows describing the free distribution of DEEP+ on both a Real-Time and Delayed basis.²⁷

The Exchange notes that other exchanges offer both aggregated and order-by-order depth of book market data products. For example, Cboe BYX offers both Multicast Depth²⁸ (also known as BYX Depth), an order-by-order depth of book market data feed, and BYX Summary Depth,²⁹ a depth of book data feed that offers aggregated quotations for all displayed orders for up to five price levels. Cboe BYX's order-by-order depth of book market data feed contains the same order-specific information that will be contained in IEX's proposed DEEP+ market data feed.³⁰ Thus, the Exchange does not believe that this aspect of the proposal raises any new or novel issues not already considered by the Commission.³¹ The Exchange plans to implement the proposed changes during the fourth quarter of 2024, pending completion of necessary technology changes and subject to effectiveness of this proposed rule change. The Exchange will announce the implementation date of the proposed changes by Trader Alert at least 10 business days in advance of such

implementation date and within 120 days of effectiveness of this proposed rule change.

2. Statutory Basis

IEX believes that the proposed rule change is consistent with the provisions of Section 6 of the Act³² in general, and with Section 6(b)(5) of the Act,³³ in particular. DEEP+ will be provided consistent with the purposes of Section 6(b)(5) of the Act.³⁴ Specifically, the Exchange believes that the proposed introduction of an order-by-order depth of book market data feed, which will provide Data Subscribers with full depth-of-market information, will serve to more closely align the information provided by IEX with that of competitor exchanges, while providing additional data to the marketplace. Thus, this proposal should help remove impediments to a free and open market, in furtherance of the protection of investors and the public interest.

Additionally, the benefit of providing additional data to the marketplace may be useful to certain market participants with trading strategies that take into account order-by-order depth of book feeds such as DEEP+. Thus, these Members may choose to deploy additional trading strategies on IEX that align with how they function on other exchanges. IEX believes that this potential deployment of additional trading strategies on IEX by certain market participants could attract additional volume to IEX (both displayed and non-displayed), which would benefit all market participants. Thus, this proposal should help remove impediments to a free and open market, in furtherance of the protection of investors and the public interest.

Moreover, DEEP+ will be available to all Data Subscribers on an equal basis including being offered free of charge to all Data Subscribers on an initial basis. By expanding all market participants' access to Real-Time market data disseminated from IEX's displayed Order Book, the proposal is not designed to permit unfair discrimination among customers, issuers, and brokers; and is designed to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system and, in general, to protect investors and the public interest.

The proposed rule change is designed to promote just and equitable principles of trade and remove impediments to and perfect the mechanism of a free and open market and a national market system by providing more detailed quotation and transaction information to market participants. The Exchange also believes this proposal is consistent with Section 6(b)(5) of the Act because it is designed to protect investors and the public interest and promote just and equitable principles of trade by providing additional transparency regarding displayed orders on the IEX Order Book, and also provides market participants with a disaggregated feed that allows them to construct the IEX BBO information otherwise than under the CTA and Nasdaq/UTP Plans. Further, the proposal would not permit unfair discrimination because the information will be available to all market participants and market data vendors on an equivalent basis. In addition, any market participant that wishes to receive IEX BBO and last sale information via the CTA and Nasdaq/UTP Plans will still be able to do so if they subscribe or access through a Data Subscriber.

The Exchange also believes that not charging a fee for DEEP+ for an initial incentive period (whether accessed on a Real-Time or Delayed basis) is appropriate, reasonable, and consistent with the Act because it is designed to incentivize market participants to subscribe to DEEP+, which may in turn encourage those same market participants to direct more order flow to the Exchange as discussed above, and such orders will have the benefit of exchange transparency, regulation, and oversight. IEX operates in a highly competitive environment, and not charging fees for DEEP+ is designed to enable it to compete effectively and to encourage market participants to connect to the Exchange.

The Exchange also believes that the proposed rule change is consistent with Section 11(A) of the Act³⁵ in that it supports (1) fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets and (2) the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities. As noted above, the Exchange will provide DEEP+ to Members and other recipients of Exchange data on terms that are fair and reasonable and not unreasonably discriminatory in that DEEP+ will be

²⁶ Should IEX in the future decide to charge for DEEP+, it will make a fee filing pursuant to the SEC rule filing process.

²⁷ While not specified in the Fee Schedule, as noted throughout this filing, IEX will be offering DEEP+ free of charge during an initial incentive period.

²⁸ See Cboe BYX Rule 11.22(c).

²⁹ See Cboe BYX Rule 11.22(k).

³⁰ See *supra* note 22.

³¹ DEEP+ Data Subscribers will also have access to the DEEP+ SNAP service, which allows Data Subscribers to download point-in-time snapshots of DEEP+ in order to enable them to accelerate late start recovery. As with its current DEEP SNAP and TOPS SNAP services, DEEP+ SNAP will be offered for no additional charge to DEEP+ Data Subscribers; thus, DEEP+ SNAP will also be offered free of charge during the initial incentive period.

³² 15 U.S.C. 78f(b).

³³ 15 U.S.C. 78f(b)(5).

³⁴ 15 U.S.C. 78f(b)(5).

³⁵ 15 U.S.C. 78k-1.

provided free of charge for an initial incentive period.

Additionally, IEX believes that the proposed rule change is consistent with the provisions with Section 6(b)(5) of the Act because DEEP+ would be accessed and subscribed to on a voluntary basis, in that neither the Exchange nor market data distributors are required by any rule or regulation to make this data available. Accordingly, distributors and subscribers can discontinue their use at any time and for any reason. Thus, the proposal should help remove impediments to a free and open market, in furtherance of the protection of investors and the public interest.

Further, IEX believes that the proposed edits to the Fee Schedule are consistent with the Act. Specifically, the proposal to update the Fee Schedule to state that DEEP+ will be offered for free,³⁶ and to revise footnote 3 to make clear that the fee's (and product's) implementation date will be on a date to be announced by Trading Alert at least ten (10) business days in advance of the product launch are consistent with the Act because they will provide clarity to, and reduce confusion of, market participants about the cost and availability of this new market data product, which should help remove impediments to a free and open market, in furtherance of the protection of investors and the public interest.

Finally, as noted in the Purpose section, offering both an order-by-order and aggregated depth of book market data product is consistent with the offerings of other exchanges. Specifically, as discussed in the Purpose section, Cboe BYX's order-by-order market data feed contains the same order-specific information that IEX will provide in DEEP+.³⁷ And Cboe BYX's order-by-order also contains the same non-order-specific information such as the Retail Liquidity Identifier, which DEEP+ will also contain.³⁸ Thus IEX believes it does not raise any new or novel issues not already considered by the Commission in the context of other exchanges' market data product filings.

B. Self-Regulatory Organization's Statement on Burden on Competition

IEX does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The

Exchange is not proposing to charge a fee for DEEP+ during an initial incentive period and will make it available to market participants on a fair and impartial basis, and on terms that are not unfairly discriminatory. In addition, the Exchange believes that providing order-by-order depth of book quotations as described above is designed to remove impediments to and perfect the mechanism of a free and open market and a national market system by providing investors with a new exchange-specific source of market data, as well as to compete with other exchanges that offer similar market data products.

With regard to intra-market competition, the proposed order-by-order depth of book market data feed will be made equally available to all Members and Data Subscribers on a fair, impartial and nondiscriminatory basis without imposing any new burdens on the Members and Data Subscribers, including the fact that it will be offered free of charge during an initial incentive period. As discussed in the Purpose and Statutory Basis sections, the proposed rule change is designed to provide all market participants more transparency into the order-by-order composition of IEX's Order Book.

With regard to inter-market competition, other exchanges are free to adopt similar market data product offerings, and, as discussed in the Purpose section, other exchanges like Cboe BYX already provide market participants the option of subscribing to an aggregated or order-by-order depth of book feed (or both). IEX's proposed DEEP+ feed will foster, not burden, competition by providing a new exchange-specific source of market data, which is similar to products offered by other exchanges. Thus, it will provide investors with a new option for receiving market data. Thus, the Exchange believes the proposed rule change is consistent with the Exchange Act because it will further encourage competition between IEX and other exchanges.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule does not:

(i) significantly affect the protection of investors or the public interest;

(ii) impose any significant burden on competition; and

(iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A) of the Act and Rule 19b-4(f)(6) thereunder.³⁹

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B) of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (<https://www.sec.gov/rules/sro.shtml>); or
- Send an email to rule-comments@sec.gov. Please include file number SR-IEX-2024-20 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090.

All submissions should refer to file number SR-IEX-2024-20. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (<https://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the

³⁶ While not specified in the Fee Schedule, as noted throughout this filing, IEX will be offering DEEP+ free of charge during an initial incentive period.

³⁷ See *supra* note 21.

³⁸ See *supra* note 22.

³⁹ CFR 240.19b-4(f)(6). In addition, Rule 19b-4(f)(6) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

⁴⁰ 15 U.S.C. 78s(b)(2)(B).

Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR-IEX-2024-20 and should be submitted on or before October 29, 2024.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.⁴¹

Vanessa A. Countryman,
Secretary.

[FR Doc. 2024-23166 Filed 10-7-24; 8:45 am]

BILLING CODE 8011-01-P

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270-523, OMB Control No. 3235-0585]

Submission for OMB Review; Comment Request; Extension: Rule 206(4)-7

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549-2736

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (the "Commission") has submitted to the Office of Management and Budget ("OMB") a request for extension of the previously approved collection of information discussed below.

The title for the collection of information is "Investment Advisers Act rule 206(4)-7, 17 CFR 275.206(4)-7, Compliance procedures and practices." This collection of information is found at 17 CFR 275.206(4)-7, and is mandatory. Rule 206(4)-7 under the

Investment Advisers Act of 1940 ("Advisers Act") requires each investment adviser registered with the Commission to (1) adopt and implement written policies and procedures reasonably designed to prevent violations of the Advisers Act and its rules, (2) review those compliance policies and procedures annually, and (3) designate a chief compliance officer who is responsible for administering the compliance policies and procedures. The rule is designed to protect investors by fostering better compliance with the securities laws. The collection of information under rule 206(4)-7 is necessary to help ensure that investment advisers maintain comprehensive internal programs that promote the advisers' compliance with the Advisers Act and its rules. The Commission's examination and oversight staff may review the information collected to assess investment advisers' compliance programs. Responses provided to the Commission pursuant to the rule in the context of the Commission's examination and oversight program are generally kept confidential. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

The respondents to this information collection are investment advisers registered with the Commission. Updated data indicate that there were 15,441 advisers registered with the Commission as of December 31, 2023. Each respondent would produce one response, per year. Commission staff has estimated that compliance with rule 206(4)-7 imposes an annual burden of approximately 90 hours per response. Based on this figure, Commission staff estimates a total annual burden of 1,389,690 hours for this collection of information.

The public may view background documentation for this information collection at the following website: www.reginfo.gov. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function. Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice by November 7, 2024 to (i) MBX.OMB.OIRA.SEC_desk_officer@omb.eop.gov and (ii) Austin Gerig, Director/Chief Data Officer, Securities and Exchange Commission, c/o Oluwaseun Ajayi, 100 F Street NE, Washington, DC 20549, or by sending an email to: PRA_Mailbox@sec.gov.

Dated: October 2, 2024.

Vanessa A. Countryman,
Secretary.

[FR Doc. 2024-23161 Filed 10-7-24; 8:45 am]

BILLING CODE 8011-01-P

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270-462, OMB Control No. 3235-0696]

Proposed Collection; Comment Request; Extension: Rules 15Fb1-1 through 15Fb6-2 and Forms SBSE, SBSE-A, SBSE-BD, SBSE-C and SBSE-W

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549-2736

Notice is hereby given that pursuant to the Paperwork Reduction Act of 1995 ("PRA") (44 U.S.C. 3501 *et seq.*) the Securities and Exchange Commission ("Commission") is soliciting comments on the existing collection of information provided for in Rules 15Fb1-1 through 15Fb6-2 and Forms SBSE, SBSE-A, SBSE-BD, SBSE-C and SBSE-W (17 CFR 240.15Fb1-1 through 240.15Fb6-2, and 17 CFR 249.1600, 249.1600a, 249.1600b, 249.1600c and 249.1601), under the Securities Exchange Act of 1934 (15 U.S.C. 78a *et seq.*). The Commission plans to submit this existing collection of information to the Office of Management and Budget ("OMB") for extension and approval.

The Commission adopted Rules 15Fb1-1 through 15Fb6-2 and Forms SBSE, SBSE-A, SBSE-BD, SBSE-C and SBSE-W on August 5, 2015 to create a process to register SBS Entities. Forms SBSE, SBSE-A, and SBSE-BD and SBSE-C were designed to elicit certain information from applicants. The Commission uses the information disclosed by applicants through the SBS Entity registration rules and forms to: (1) determine whether an applicant meets the standards for registration set forth in the provisions of the Exchange Act; and (2) develop an information resource regarding SBS Entities where members of the public may obtain relevant, up-to-date information about SBS Entities, and where the Commission may obtain information for examination and enforcement purposes. Without the information provided through these SBS Entity registration rules and forms, the Commission could not effectively determine whether the applicant meets the standards for registration or implement policy objectives of the Exchange Act.

⁴¹ 17 CFR 200.30-3(a)(12).

The information collected pursuant to Rule 15Fb3-2 and Form SBSE-W allows the Commission to determine whether it is appropriate to allow an SBS Entity to withdraw from registration and to facilitate that withdrawal. Without this information, the Commission would be unable to effectively determine whether it was appropriate to allow an SBS Entity to withdraw. In addition, it would be more difficult for the Commission to properly regulate SBS Entities if it were unable to quickly identify those that have withdrawn from the security-based swap business.

As of September 30, 2024, 53 entities have registered with the Commission as SBS Entities. The Commission estimates that an additional five entities will register as SBS Entities. The Commission estimates that these SBS Entities likely would incur a total burden of 10,660 burden hours per year to comply with Rules 15Fb1-1 through 15Fb6-2 and Forms SBSE, SBSE-A, SBSE-BD, SBSE-C and SBSE-W.

In addition, Rules 15Fb1-1 through 15Fb6-2 and Forms SBSE, SBSE-A, SBSE-BD, SBSE-C and SBSE-W may impose certain costs on non-resident persons that apply to be registered with the Commission as SBS Entities, including initial and ongoing costs associated with obtaining an opinion of counsel indicating that it can, as a matter of law, provide the Commission with access to its books and records and submit to Commission examinations, and an ongoing cost associated with establishing and maintaining a relationship with a U.S. agent for service of process.

The staff estimates, based on internet research,¹ that it would cost each nonresident SBS Entity approximately \$211 annually to appoint and maintain a relationship with a U.S. agent for service of process. Consequently, the total cost for all nonresident SBS Entities to appoint and maintain relationships with U.S. agents for service of process is approximately \$5,697 per year.

Nonresident SBS Entities also would incur outside legal costs associated with obtaining an opinion of counsel. The staff estimates that each of the estimated 27 non-resident persons that likely will

apply to register as SBS Entities with the Commission would incur, on average, approximately \$25,000 in outside legal costs to obtain the opinion of counsel necessary to register, and that the total annualized cost for Nonresident SBS Entities to obtain this opinion of counsel would be approximately \$225,000. Nonresident SBS Entities would also need to obtain a revised opinion of counsel after any changes in the legal or regulatory framework that would impact the SBS Entity's ability to provide, or manner in which it provides, the Commission with prompt access to its books and records or that impacts the Commission's ability to inspect and examine the SBS Entity. We do not believe this would occur frequently, and therefore estimate that one non-resident entity may need to recertify annually. Thus, the total ongoing cost associated with obtaining a revised opinion of counsel regarding the new regulatory regime would be approximately \$25,000 annually. Consequently, the total annualized cost burden associated with Rules 15Fb1-1 through 15Fb6-2 and Forms SBSE, SBSE-A, SBSE-BD, SBSE-C and SBSE-W would be approximately \$255,697 per year.

Written comments are invited on: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted by December 9, 2024.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information under the PRA unless it displays a currently valid OMB control number.

Please direct your written comments to: Austin Gerig, Director/Chief Data Officer, Securities and Exchange Commission, c/o Oluwaseun Ajayi, 100 F Street NE, Washington, DC 20549, or send an email to: PRA_Mailbox@sec.gov.

Dated: October 3, 2024.

Vanessa A. Countryman,
Secretary.

[FR Doc. 2024-23235 Filed 10-7-24; 8:45 am]

BILLING CODE 8011-01-P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #20699 and #20700; FLORIDA Disaster Number FL-20012]

Presidential Declaration Amendment of a Major Disaster for the State of Florida

AGENCY: U.S. Small Business Administration.

ACTION: Amendment 1.

SUMMARY: This is an amendment of the Presidential declaration of a major disaster for the State of Florida (FEMA-4828-DR), dated 09/28/2024.

Incident: Hurricane Helene.

Incident Period: 09/23/2024 and continuing.

DATES: Issued on 10/01/2024.

Physical Loan Application Deadline Date: 11/27/2024.

Economic Injury (EIDL) Loan Application Deadline Date: 06/30/2025.

ADDRESSES: Visit the MySBA Loan Portal at <https://lending.sba.gov> to apply for a disaster assistance loan.

FOR FURTHER INFORMATION CONTACT:

Alan Escobar, Office of Disaster Recovery & Resilience, U.S. Small Business Administration, 409 3rd Street SW, Suite 6050, Washington, DC 20416, (202) 205-6734.

SUPPLEMENTARY INFORMATION: The notice of the President's major disaster declaration for the State of Florida, dated 09/28/2024, is hereby amended to include the following areas as adversely affected by the disaster:

Primary Counties (Physical Damage and Economic Injury Loans): Columbia, Gilchrist, Hamilton, Leon, Suwannee.

Contiguous Counties (Economic Injury Loans Only):

Florida: Baker, Bradford, Gadsden, Union.

Georgia: Clinch, Echols, Grady.

All other information in the original declaration remains unchanged.

(Catalog of Federal Domestic Assistance Number 59008)

Rafaela Monchek,

Deputy Associate Administrator, Office of Disaster Recovery & Resilience,

[FR Doc. 2024-23206 Filed 10-7-24; 8:45 am]

BILLING CODE 8026-09-P

¹ See, e.g., <https://www.incorp.com/registered-agent-services/> (as of September 13, 2024, \$129 per state per year), <https://www.wolterskluwer.com/en/solutions/ct-corporation/registered-agent-services-solutions> (as of September 13, 2024, \$354 per year), and <https://www.aicorp.com/services/registered-agent> (as of September 13, 2024, \$149 per year). The staff sought websites that provided pricing information and a comprehensive description of their registered agent services. We calculated our estimate by averaging the costs provided on these three websites—(\$129 + \$354 + \$149) ÷ 3 = \$211.

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration Number #20713
Disaster Number ZZ-00020]

**The Entire United States and U.S.
Territories; Military Reservist
Economic Injury Disaster Loan
Program (MREIDL)**

AGENCY: U.S. Small Business
Administration.

ACTION: Notice.

SUMMARY: This is a notice of the Military
Reservist Economic Injury Disaster Loan
Program (MREIDL), dated 10/01/2024.

DATES: Issued on 10/01/2024.

MREIDL Loan Application Deadline
Date: 1 year after the essential employee
is discharged or released from active
service.

ADDRESSES: Visit the MySBA Loan
Portal at <https://lending.sba.gov> to
apply for a disaster assistance loan.

FOR FURTHER INFORMATION CONTACT:
Alan Escobar, Office of Disaster
Recovery & Resilience, U.S. Small
Business Administration, 409 3rd Street
SW, Suite 6050, Washington, DC 20416,
(202) 205-6734.

SUPPLEMENTARY INFORMATION: This
notice establishes the application filing
period for the Military Reservist
Economic Injury Disaster Loan Program
(MREIDL).

Effective 10/01/2024 small businesses
employing military reservists may apply
for economic injury disaster loans if
those employees are ordered to perform
active service for a period of more than
30 consecutive days, and those
employees are essential to the success of
the small businesses' daily operations.

The purpose of the MREIDL program
is to provide funds to an eligible small
business to meet its ordinary and
necessary operating expenses that it
could have met, but is unable to meet,
because an essential employee was
ordered to perform active service for
more than 30 consecutive days in his or
her role as a military reservist. These
loans are intended only to provide the
amount of working capital needed by a
small business to pay its necessary
obligations as they mature until
operations return to normal after the
essential employee is released from
active service.

Applications for the Military Reservist
Economic Injury Disaster Loan Program
may be submitted online using the
MySBA Loan Portal (<https://lending.sba.gov>).

Please contact the SBA disaster
assistance customer service center by
email at disastercustomerservice@

[sba.gov](https://lending.sba.gov) or by phone at 1-800-659-2955
for further assistance.

The interest rates are published
quarterly in the **Federal Register**. The
current rate for eligible small businesses
is 4.000.

The number assigned is 207130.

(Catalog of Federal Domestic Assistance
Number 59008)

Francisco Sánchez, Jr.,
*Associate Administrator, Office of Disaster
Recovery & Resilience.*

[FR Doc. 2024-23210 Filed 10-7-24; 8:45 am]

BILLING CODE 8026-09-P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #20711 and #20712;
GEORGIA Disaster Number GA-20013]

**Presidential Declaration Amendment of
a Major Disaster for the State of
Georgia**

AGENCY: U.S. Small Business
Administration.

ACTION: Amendment 1.

SUMMARY: This is an amendment of the
Presidential declaration of a major
disaster for the State of Georgia (FEMA-
4830-DR), dated September 30, 2024.

DATES: Issued on October 1, 2024.

Physical Loan Application Deadline
Date: November 29, 2024.

*Economic Injury (EIDL) Loan
Application Deadline Date:* June 30,
2025.

ADDRESSES: Visit the MySBA Loan
Portal at <https://lending.sba.gov> to
apply for a disaster assistance loan.

FOR FURTHER INFORMATION CONTACT:
Alan Escobar, Office of Disaster
Recovery & Resilience, U.S. Small
Business Administration, 409 3rd Street
SW, Suite 6050, Washington, DC 20416,
(202) 205-6734.

SUPPLEMENTARY INFORMATION: The notice
of the President's major disaster
declaration for the State of Georgia,
dated September 30, 2024, is hereby
amended to include the following areas
as adversely affected by the disaster:

Incident: Hurricane Helene.

Incident Period: September 24, 2024
and continuing.

*Primary Counties (Physical Damage and
Economic Injury Loans):* Atkinson,
Bacon, Ben Hill, Berrien, Bulloch,
Burke, Candler, Chatham, Clinch,
Colquitt, Cook, Echols, Emanuel,
Evans, Glascock, Irwin, Jeff Davis,
Jenkins, Johnson, Lanier, Laurens,
Lincoln, McDuffie, Montgomery,
Screven, Telfair, Treutlen, Ware,
Washington, Wheeler.

*Contiguous Counties (Economic Injury
Loans Only):*

Georgia: Baldwin, Bleckley, Charlton,
Dodge, Effingham, Elbert, Hancock,
Mitchell, Tift, Turner, Twiggs,
Wilcox, Wilkes, Wilkinson, Worth.
South Carolina: Allendale, Barnwell,
Hampton, Jasper.

Florida: Baker, Columbia.

All other information in the original
declaration remains unchanged.

(Catalog of Federal Domestic Assistance
Number 59008)

Rafaela Monchek,

*Deputy Associate Administrator, Office of
Disaster Recovery & Resilience.*

[FR Doc. 2024-23209 Filed 10-7-24; 8:45 am]

BILLING CODE 8026-09-P

SURFACE TRANSPORTATION BOARD

[Docket No. FD 36377 (Sub-No. 9)]

**BNSF Railway Company—Trackage
Rights Exemption—Union Pacific
Railroad Company**

By petition filed on July 26, 2024,
BNSF Railway Company (BNSF)
requests that the Board partially revoke
the trackage rights exemption granted to
it under 49 CFR 1180.2(d)(7) in Docket
No. FD 36377 (Sub-No. 8), as necessary
to permit that trackage rights
arrangement to expire at midnight on
December 31, 2024.

As explained by BNSF in its verified
notice of exemption in Docket No. FD
36377 (Sub-No. 8), BNSF and Union
Pacific Railroad Company (UP) entered
into an agreement granting BNSF
restricted, local trackage rights over two
rail lines owned by UP between: (1) UP
milepost 93.2 at Stockton, Cal., on UP's
Oakland Subdivision, and UP milepost
219.4 at Elsey, Cal., on UP's Canyon
Subdivision, a distance of 126.2 miles;
and (2) UP milepost 219.4 at Elsey, and
UP milepost 280.7 at Keddie, Cal., on
UP's Canyon Subdivision, a distance of
61.3 miles (collectively, the Lines).
BNSF Verified Notice of Exemption 2,
*BNSF Ry.—Trackage Rts. Exemption—
Union Pac. R.R.*, FD 36377 (Sub-No. 8).
BNSF further stated that the trackage
rights arrangement is intended to permit
BNSF to move empty and loaded unit
ballast trains to and from the ballast pit
located at Elsey. *Id.* According to BNSF,
it filed its verified notice of exemption
under the Board's trackage rights class
exemption at 49 CFR 1180.2(d)(7),
instead of the temporary trackage rights
exemption at 49 CFR 1180.2(d)(8),
because the trackage rights covered by
the notice are local rather than
overhead. BNSF Verified Notice of
Exemption 1 n.1, 2, *BNSF Ry.—
Trackage Rts. Exemption—Union Pac.
R.R.*, FD 36377 (Sub-No. 8).

In its petition, BNSF asks the Board to partially revoke the exemption as necessary to permit the trackage rights to expire at midnight on December 31, 2024, pursuant to the parties' agreement. (See BNSF Pet. 1–2); see also BNSF Verified Notice of Exemption, Ex. B at 2, *BNSF Ry.—Trackage Rts. Exemption—Union Pac. R.R.*, FD 36377 (Sub-No. 8). BNSF argues that granting this petition will promote the rail transportation policy at 49 U.S.C. 10101 and that the partial revocation would be consistent with the limited scope of the transaction and would not have an adverse effect on shippers. (BNSF Pet. 3.) In addition, BNSF asserts that the Board has granted similar petitions for partial revocation to permit temporary trackage rights to expire, including petitions involving prior iterations of the trackage rights agreement at issue here. (*Id.* at 3–4.)

Discussion and Conclusions

Although BNSF and UP have expressly agreed on the duration of the proposed trackage rights agreement, trackage rights approved under the class exemption at 49 CFR 1180.2(d)(7) typically remain effective indefinitely, regardless of any contract provisions. At times, however, the Board has partially revoked a trackage rights exemption to allow those rights to expire after a limited time rather than lasting in perpetuity. See, e.g., *BNSF Ry.—Trackage Rts. Exemption—Union Pac. R.R.*, FD 6377 (Sub-No. 7) (STB served February 24, 2023) (granting a petition to partially revoke a trackage rights exemption involving the Lines at issue in this case); *New Orleans Pub. Belt R.R.—Trackage Rts. Exemption—III. Cent. R.R.*, FD 36198 (Sub-No. 1) (STB served June 20, 2018).

Granting partial revocation in these circumstances to permit the trackage rights to expire at the end of 2024 would eliminate the need for BNSF to file a second pleading seeking discontinuance authority when the agreement expires, thereby promoting the aspects of the rail transportation policy at 49 U.S.C. 10101(2), (7), and (15). Moreover, partially revoking the exemption to limit the term of the trackage rights would not result in an abuse of market power because the trackage rights at issue are solely to allow BNSF to move empty and loaded unit ballast trains to and from the ballast pit in Elsey for use in BNSF's maintenance-of-way projects. (See BNSF Pet. 2.) Therefore, the Board will grant the petition and permit the trackage rights exempted in Docket No. FD 36377 (Sub-No. 8) to expire at midnight on December 31, 2024.

To provide the statutorily mandated protection to any employee adversely affected by the discontinuance of trackage rights, the Board will impose the employee protective conditions set forth in *Oregon Short Line Railroad—Abandonment Portion Goshen Branch Between Firth & Ammon, in Bingham & Bonneville Counties, Idaho*, 360 I.C.C. 91 (1979).

This action is categorically excluded from environmental review under 49 CFR 1105.6(c).

It is ordered:

1. The petition for partial revocation of the trackage rights class exemption is granted.
2. As discussed above, the trackage rights in Docket No. FD 36377 (Sub-No. 8) are permitted to expire at midnight on December 31, 2024, subject to the employee protective conditions set forth in *Oregon Short Line*.
3. Notice of this decision will be published in the **Federal Register**.
4. This decision is effective on November 7, 2024. Petitions for stay must be filed by October 18, 2024. Petitions for reconsideration must be filed by October 28, 2024.

Decided: October 3, 2024.

By the Board, Board Members Fuchs, Hedlund, Primus, and Schultz.

Eden Besera,

Clearance Clerk.

[FR Doc. 2024–23254 Filed 10–7–24; 8:45 am]

BILLING CODE 4915–01–P

DEPARTMENT OF TREASURY

Internal Revenue Service

Appointment of Members of the Legal Division to the Performance Review Board, Internal Revenue Service

Under the authority granted to me as Chief Counsel of the Internal Revenue Service by the General Counsel of the Department of the Treasury by General Counsel Directive 15, pursuant to the Civil Service Reform Act, I have appointed the following persons to the Legal Division Performance Review Board, Internal Revenue Service Panel:

1. Drita Tonuzi, Deputy Chief Counsel (Operations)
2. Paul T. Butler, Associate Chief Counsel (Procedures and Administration)
3. Robin Greenhouse, Division Counsel (Large Business and International)
4. Edith M. Shine, Associate Chief Counsel (Finance and Management)
5. Holly A. Porter, Associate Chief Counsel (Passthroughs and Special Industries)

Alternate: Mark L. Hulse, Division Counsel (Tax Exempt and Government Entities)

This publication is required by 5 U.S.C. 4314(c)(4).

Marjorie A. Rollinson,

Chief Counsel, Internal Revenue Service.

[FR Doc. 2024–23233 Filed 10–7–24; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF TREASURY

Internal Revenue Service

Appointment of Members of the Legal Division to the Performance Review Board, Internal Revenue Service

Under the authority granted to me as Chief Counsel of the Internal Revenue Service by the General Counsel of the Department of the Treasury by General Counsel Directive 15, pursuant to the Civil Service Reform Act, I have appointed the following persons to the Legal Division Performance Review Board, Internal Revenue Service Panel:

1. Eric S. Nguyen, Deputy General Counsel, Department of the Treasury—Chair
2. Elizabeth P. Askey, Deputy Chief Appeals, Independent Office of Appeals (IRS)
3. Melanie R. Krause, Chief Operating Officer, (IRS)

Alternate: Douglas W. O'Donnell, Deputy Commissioner (IRS)

This publication is required by 5 U.S.C. 4314(c)(4).

Marjorie A. Rollinson,

Chief Counsel, Internal Revenue Service.

[FR Doc. 2024–23234 Filed 10–7–24; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF VETERANS AFFAIRS

Advisory Committee on the Readjustment of Veterans, Notice of Meeting

The Department of Veterans Affairs (VA) gives notice under the Federal Advisory Committee Act, 5 U.S.C. ch. 10., that the Advisory Committee on the Readjustment of Veterans will meet in person on November 5, 2024–November 6, 2024 at the Lafayette Building, 811 Vermont Avenue NW, Conference Room 3166, Washington, DC 20009. The sessions will begin and end as follows:

Dates	Times
Tuesday, November 5, 2024.	8 a.m. to 5 p.m. eastern standard time (EST).
Wednesday, November 6, 2024.	8 a.m. to 5 p.m. EST.

The meeting sessions are open to the public.

The purpose of the Committee is to advise the VA regarding the provision by VA of benefits and services to assist Veterans in the readjustment to civilian life. The Committee, comprised of 14 subject matter experts, advises the Secretary through the VA Readjustment Counseling Service. In carrying out this duty, the Committee shall take into account the needs of Veterans who served in combat theaters of operation.

On November 5, 2024, and November 6, 2024, the Committee will meet to assemble, review, and assess information relating to the needs of Veterans readjusting to civilian life and the effectiveness of VA services in assisting Veterans in that readjustment. They will also receive updated briefings on various VA programs to further their ability to discuss and explore potential recommendations to be included in the next annual report.

Time will be allotted for the public to provide comments starting at 4 p.m. EST and ending no later than 4:30 p.m. EST. The comment period may end sooner, if there are no comments presented or they are exhausted before the end time. Individuals interested in providing comments during the public comment period are allowed no more than three minutes for their statements. Additionally, the Committee will accept written comments from interested parties on issues outlined in the meeting agenda or other issues regarding the readjustment of Veterans. Parties should contact Mr. Joshua Mathis, via email at Joshua.Mathis@va.gov or by mail at Department of Veterans Affairs, Readjustment Counseling Service (10RCS), 810 Vermont Avenue, Washington, DC 20420.

Any member of the public seeking additional information should contact Mr. Mathis at the email address noted above.

Dated: October 2, 2024.

Jelessa M. Burney,
Federal Advisory Committee Management Officer.
[FR Doc. 2024-23169 Filed 10-7-24; 8:45 am]

BILLING CODE 8320-01-P

DEPARTMENT OF VETERANS AFFAIRS

Privacy Act of 1974; Matching Program

AGENCY: Department of Veterans Affairs (VA).

ACTION: Notice of a new matching program.

SUMMARY: In accordance with the Privacy Act of 1974, as amended, VA is providing notice of a new matching program between VA and the Department of Health and Human Services (HHS) Centers for Medicare & Medicaid Services (CMS) entitled “Disclosure of Information to Support the Veterans Affairs’ “Seek to Prevent Fraud, Waste, and Abuse Initiative.”

DATES: Comments on this matching program must be received no later than November 7, 2024. If no public comment is received during the period allowed for comment or unless otherwise published in the **Federal Register** by VA, the new agreement will become effective a minimum of 30 days after date of publication in the **Federal Register**. If VA receives public comments, VA shall review the comments to determine whether any changes to the notice are necessary. This matching program will be valid for 18 months from the effective date of this notice.

ADDRESSES: Comments may be submitted through www.Regulations.gov or mailed to VA Privacy Service, 810 Vermont Avenue NW, (005X6F), Washington, DC 20420. Comments should indicate that they are submitted in response to “Disclosure of Information to Support the Veteran Affairs’ Seek to Prevent Fraud, Waste, and Abuse Initiative.” Comments received will be available at regulations.gov for public viewing, inspection, or copies.

FOR FURTHER INFORMATION CONTACT: Elizabeth Morales, Director, VA Office of Business Oversight Program Integrity Office, 1615 Woodward Street, Austin, TX 78772, (512) 673-8960.

SUPPLEMENTARY INFORMATION: This Agreement establishes the terms, conditions, and procedures under which CMS will provide certain data to VA that supports the VA’s Seek to Prevent Fraud, Waste, and Abuse initiative. The data will be provided from CMS’ database of enrolled Medicare providers and suppliers (System of Records Notice [SORN] No. 09-70-0532, *Provider Enrollment, Chain, and Ownership System [PECOS]*). Using PECOS data in a matching program for this purpose will

provide VA prompt access to extant information, using an efficient process that both eliminates the need to manually compare substantial numbers of data-intensive files and enables VA to leverage, instead of duplicating, the costly Advance Provider Screening process that CMS uses to check suitability of Medicare providers and generate the data in PECOS.

Participating Agencies: VA and CMS.

Authority for Conducting the Matching Program: This Agreement is executed pursuant to the Privacy Act (5 United States Code [U.S.C.] 552a) and the regulations and guidance promulgated thereunder; Office of Management and Budget (OMB) Circular A-108, Federal Agency Responsibilities for Review, Reporting, and Publication under the Privacy Act, published at 81 **Federal Register** (FR) 94424 (December 23, 2016); and OMB guidelines pertaining to computer matching published at 54 FR 25818 (June 19, 1989). Title 38 U.S.C. 7301(b) states that the primary function of VA is to provide a complete medical and hospital service for the care of eligible Veterans. In carrying out this function, including through contracts with external entities and providers, VA has an obligation to (1) ensure providers furnish care that is appropriate and safe and meets or exceeds professional standards for quality and (2), in the case of external providers, maintain billing integrity and compliance with contractual terms.

Purpose(s): Under this matching program, VA internal and external providers will be matched against the database of Medicare providers and suppliers who have been revoked by CMS pursuant to 42 Code of Federal Regulations (CFR) section 424.535. VA intends to review the information provided, perform additional validation, and if deemed appropriate, conduct further investigation, or refer the matter to the VA Office of the Inspector General (OIG) for further investigation. Based on additional validation or investigation, should VA determine VA program requirements have been violated, VA intends to take action (or refer to the OIG for action) against the VA internal and external providers. Such action may be based on activities that endanger VA patients and/or reflect improper or erroneous billing practices related to claims for health care provided to VA beneficiaries. Actions VA may take include (1) terminating or modifying existing contractual or provider agreements; (2) stopping referral of VA patients to the VA external providers; (3) referring the VA internal and external providers to the

OIG; (4) performing pre- or post-payment reviews of claims paid or submitted; or (5) taking disciplinary actions or removing, demoting, or suspending VA internal providers.

Categories of Individuals: VA internal and external health care providers will be matched against the database of Medicare providers who have been revoked by CMS under 42 CFR 424.535. “Provider” is defined by 42 CFR 400.202 as a “hospital, a Critical Access Hospital, a skilled nursing facility, a comprehensive outpatient rehabilitation facility, a home health agency, or a hospice that has in effect an agreement to participate in Medicare, or a clinic, a rehabilitation agency, or a public health agency that has in effect a similar agreement but only to furnish outpatient physical therapy or speech pathology services, or a community mental health center that has in effect a similar agreement but only to furnish partial hospitalization services.”

Categories of Records: VA will provide CMS electronic files, in a format defined by CMS, containing identifying information required to match VA records with CMS records. Data fields will include one or more of the following elements: (1) Name of Provider/Business; (2) Tax Identification Number (TIN) (EIN, ITIN or SSN); (3) National Provider Identifier (NPI); (4) State(s) in which the provider is providing services; and (5) Specialty Code or Taxonomy Code. Upon matching the TIN or NPI, CMS will provide VA the matched data elements above and the following additional fields: (1) NPI (for individuals) where VA provided a TIN; (2) Current Enrollment Status; (3) Current Enrollment Status Effective Date; (4) Status Reason (PECOS codes used to denote the specific reason(s) on which the final revocation was based); and (5) All NPIs associated with a revoked TIN to include all above fields (1–4) and Enrollment State, Specialty, Role, Enrollment Bar status, and Enrollment Bar Expiration Date (if applicable).

System(s) of Records: VA will provide information covered by SOR 77VA10E2E, *Health Care Provider Credentialing and Privileging Records-VA*, last published in full at 85 FR 7395 (February 7, 2020), routine uses 1 and 2; SOR 23VA10NB3, *Non-VA Care (Fee) Records-VA*, last published in full at 80 FR 45590 (July 30, 2015), routine use 2 and 30; SOR 02VA135, *Applicants for Employment under Title 38, U.S.C.-VA*, last published in full at 42 FR 49728 (September 27, 1977), and updated at 51 FR 25969 (July 17, 1986), 55 FR 42534 (October 19, 1990), and 58 FR 40852 (July 30, 1993), see routine uses 1 and

2 published at 42 FR 49728; and SOR 186VA10D, entitled “Community Care Provider Profile Management System,” last published in full at 86 FR 6979 (January 25, 2021). See routine use 10. CMS will provide information covered by Provider Enrollment Chain and Ownership System (PECOS), System No. 09–70–0532, last published in full at 71 FR 60536 (Oct. 13, 2006) and updated at 78 FR 32257 (May 29, 2013) and 83 FR 6591 (Feb. 14, 2018), see routine use 6 published at 71 FR 60536 and the unnumbered routine use published at 78 FR 32257; and National Plan and Provider Enumeration System (NPPES), System No. 09–70–0555, last published in full at 75 FR 30411 (June 1, 2010) and updated at 78 FR 32257 (May 29, 2013) and 83 FR 6591 (Feb. 14, 2018), see routine use 5 published at 75 FR 30411 and the unnumbered routine use published at 78 FR 32257.

Signing Authority

The Senior Agency Official for Privacy, or designee, approved this document and authorized the undersigned to sign and submit the document to the Office of the Federal Register for publication electronically as an official document of the Department of Veterans Affairs. John Oswalt, Chief Privacy Officer and Chair of the Data Integrity Board, Department of Veterans Affairs approved this document on August 27, 2024 for publication.

Dated: October 3, 2024.

Amy L. Rose,

Government Information Specialist, VA Privacy Service, Office of Compliance, Risk and Remediation, Office of Information and Technology, Department of Veterans Affairs.

[FR Doc. 2024–23225 Filed 10–7–24; 8:45 am]

BILLING CODE P

DEPARTMENT OF VETERANS AFFAIRS

Veterans Rural Health Advisory Committee, Amended, Notice of Meeting

The Department of Veterans Affairs (VA) gives notice under the Federal Advisory Committee Act, 5 U.S.C. ch. 10, that the Veterans Rural Health Advisory Committee will hold its face-to-face meeting at the American Legion Build, 1608 K St. NW, Washington, DC 20006 on Thursday October 24, 2024. The meeting will convene at 8 a.m., eastern standard time (EST) and adjourn at 4:30 p.m. EST. The meeting sessions are open to the public. Additionally, a meeting link is available for individuals who cannot attend in person and would like to join online. The meeting can be

accessed through the <https://veteransaffairs.webex.com/veteransaffairs/j.php?MTID=m362183abee8a40616be272e42b86ac9b> or by telephone, +1–404–397–1596, Conference ID 2820 022 4291.

The purpose of the Committee is to advise the Secretary of VA on rural health care issues affecting Veterans. The Committee examines programs and policies that impact the delivery of VA rural health care to Veterans and discusses ways to improve and enhance VA access to rural health care services for Veterans.

The agenda will include updates from Department leadership; the Executive Director, VA Office of Rural Health; and the Committee Chair; as well as presentations by subject-matter experts on general rural health care access.

Time will be allocated for receiving public comments on October 24, 2024, at 5 p.m. EDT. Interested parties should contact Mr. Paul Boucher, by email at paul.boucher@va.gov, at (207) 458–7129, or send by mail to 810 Vermont Avenue NW (12RH), ATTN: VRHAC Committee, Washington, DC 20420 no later than close of business on October 14, 2024. Individuals wishing to speak are invited to submit a 1–2-page summary of their comment for inclusion in the official meeting record no later than close of business on October 14, 2024. Any member of the public seeking additional information should contact Mr. Boucher at the email address noted above or 207–458–7129.

Dated: October 3, 2024.

LaTonya L. Small,

Federal Advisory Committee Management Officer.

[FR Doc. 2024–23252 Filed 10–7–24; 8:45 am]

BILLING CODE 8320–01–P

DEPARTMENT OF VETERANS AFFAIRS

Department of Veterans Affairs Voluntary Service National Advisory Committee, Notice of Meeting, Amended

The Department of Veterans Affairs (VA) gives notice under the Federal Advisory Committee Act, 5 U.S.C. ch. 10, that the Executive Committee of the VA Voluntary Service (VAVS) National Advisory Committee (NAC) will meet October 24–25, 2024 at the Disabled American Veterans Washington Headquarters located at 1300 I Street NW, Suite 400 West, Washington, DC 20005. The meeting sessions will begin and end as follows:

Meeting date(s):	Meeting time(s):
Thursday, October 24, 2024	9 a.m. to 5 p.m. eastern standard time (EST).
Friday, October 25, 2024	9 a.m. to 12:30 p.m. EST.

The meeting sessions are open to the public.

The Executive Committee, a working group of the VAVS NAC, comprised of 20 major Veteran, civic, and service organizations, advises the Secretary, through the Under Secretary for Health, on the coordination and promotion of volunteer activities and strategic partnerships within VA health care facilities, in the community, and on matters related to volunteerism and charitable giving.

Agenda topics will include the NAC goals and objectives; review of minutes from the May 14–16, 2024 meeting; briefings from VA Chief of Staff, VA

Advisory Committee Management Office, and VA Center for Development and Civic Engagement (CDCE); subcommittee reports; review of standard operating procedures; assessment of member organization data; innovation for optimal access to care; cross committee collaboration among Federal advisory committees; extending programming into communities; and any new business.

Interested public members can join the meeting virtually via dial-in number at 1–872–701–0185, Conference ID 678 578 807#. Also, the public may submit written statements for the Committee’s review to Sabrina C. Clark, Ph.D.,

Designated Federal Officer, VA Center for Development and Civic Engagement (15CDCE), Department of Veterans Affairs, 810 Vermont Avenue NW, Washington, DC, 20420, or email at Sabrina.Clark@va.gov. Any member of the public wishing to attend the meeting or seeking additional information should contact Dr. Clark at 202–536–8603.

Dated: September 25, 2024.

Jelessa M. Burney,
Federal Advisory Committee Management Officer.

[FR Doc. 2024–23159 Filed 10–7–24; 8:45 am]

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Part II

Securities and Exchange Commission

17 CFR Part 242

Regulation NMS: Minimum Pricing Increments, Access Fees, and
Transparency of Better Priced Orders; Final Rule

SECURITIES AND EXCHANGE COMMISSION

17 CFR Part 242

[Release No. 34–101070; File No. S7–30–22]

RIN 3235–AN23

Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders

AGENCY: Securities and Exchange Commission.

ACTION: Final rule.

SUMMARY: The Securities and Exchange Commission (“Commission” or “SEC”) is adopting amendments to certain rules of Regulation National Market System (“Regulation NMS”) under the Securities Exchange Act of 1934, as amended (“Exchange Act”) to amend the minimum pricing increments for the quoting of certain NMS stocks, reduce the access fee caps, and enhance the transparency of better priced orders.

DATES: *Effective Date:* December 9, 2024. *Compliance dates:* See section VI., titled “Compliance Dates,” for further information on transitioning to the final rules.

FOR FURTHER INFORMATION CONTACT: Kelly Riley, Senior Special Counsel, Johnna Dumler, Special Counsel, Steve Kuan, Special Counsel, Marc McKayle, Special Counsel, Leigh Roth, Special Counsel, and Alba Baze, Attorney-Advisor, at (202) 551–5500, Office of Market Supervision, Division of Trading and Markets, Commission, 100 F Street NE, Washington, DC 20549.

SUPPLEMENTARY INFORMATION: The Commission is adopting amendments to the following rules under Regulation NMS:

Commission reference	CFR citation (17 CFR)
Rule 600(b)(69)	§ 242.600(b)(69)
Rule 600(b)(89)	§ 242.600(b)(89)
Rule 600(b)(93)	§ 242.600(b)(93)
Rule 603	§ 242.603
Rule 610	§ 242.610
Rule 612	§ 242.612

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I. Introduction

Consistent with Congress’s directive almost 50 years ago to facilitate the establishment of a national market system,¹ the Commission is amending certain of its rules to respond to market developments since those rules were adopted, so that those rules continue to benefit investors and the markets. Specifically, the Commission is taking the following actions to continue to fulfill Congress’s directive and advance the objectives of investor protection and the maintenance of fair and orderly markets:

- *Reduce Transaction Costs for Investors by Reducing Minimum Pricing Increments.* The amendments will relax

¹ See Public Law 94–29 (S.249), June 4, 1975, Securities Acts Amendments of 1975 (“1975 Amendments”). See also 15 U.S.C. 78k–1.

existing restrictions on market-wide minimum pricing increments (“tick sizes”), thus reducing transaction costs for investors and relaxing a constraint on price discovery for certain stocks.

The reduced tick size will benefit investors and market participants by: (i) allowing stocks to be priced more efficiently and competitively, therefore lowering costs for investors to trade in those stocks; and (ii) improving liquidity, competition, and price efficiency in the markets.

- *Improve Market Quality for Investors by Reducing Access Fee Caps and Increasing Transparency.* The amendments will reduce the maximum fees that trading centers (e.g., securities exchanges) are allowed to charge investors for execution against protected quotations (“access fee caps”). The amendments will also address the lack of transparency around the cost of a transaction at the time of a trade execution by requiring exchange fees and rebates to be determinable at the time of the execution.

The amendments will benefit investors and market participants by: (i) providing for access fee caps that accommodate the change in tick sizes; (ii) providing quotations that are more accurate and reflective of market forces; (iii) mitigating potential conflicts of interest between broker-dealers and their customers, where a broker-dealer is incentivized to route to the exchange offering the most favorable fees or rebates, which can lead to potentially worse execution quality for customers; (iv) reducing the complexity associated with the fees and rebates models; and (v) increasing the transparency of transaction fees and rebates.

- *Improve Transparency to Investors about Better Priced Orders.* The amendments will increase price transparency by accelerating the implementation of previously adopted definitions of “round lot” and “odd-lot information” and by adding a data element for the best odd-lot orders to buy and sell (“BOLO”) to the definition of “odd-lot information.”

These amendments will improve information available to investors and other market participants about better priced orders in smaller sizes that are available in the market.

In 1975, Congress explicitly granted the Commission “broad authority to oversee the implementation, operation, and regulation of the national market system” and the “clear responsibility to assure that the system develops and operates in accordance with Congressionally determined goals and

objectives.”² The 1975 Amendments and section 11A of the Exchange Act set forth Congress’s findings regarding the nation’s securities markets and direct the Commission to facilitate the establishment of a national market system in accordance with specified Congressional findings and objectives.³

Since 1975, the Commission has regulated the national market system, adhering to the objectives of efficient, competitive, fair, and orderly markets that are in the public interest and protect investors, which are essential to meeting the investment needs of the public and reducing the cost of capital for listed companies.⁴ The national market system is premised on promoting fair competition among markets, while at the same time assuring that all of these markets are linked together, through facilities and rules, in a unified system that promotes interaction among the orders of buyers and sellers in a particular NMS stock.⁵

² Senate Report on Securities Act Amendments of 1975, S. Rep. No. 94–75 at 8–9.

³ In particular, Congress found that it is in the public interest and appropriate for the protection of investors and maintenance of fair and orderly markets to assure five objectives: (1) economically efficient execution of transactions; (2) fair competition among brokers and dealers and among exchange markets, and between markets other than exchange markets; (3) the availability to brokers, dealers and investors of information with respect to quotations for and transactions in securities; (4) the practicability of brokers executing investors’ orders in the best market; and (5) an opportunity, consistent with items (1) and (4), for investors’ orders to be executed without the participation of a dealer. See 15 U.S.C. 78k–1(a)(1)(C). Congress also found that new data processing and communications techniques could create the opportunity for more efficient and effective market operations, and that “[t]he linking of all markets for qualified securities through communication and data processing facilities will foster efficiency, enhance competition, increase the information available to brokers, dealers, and investors, facilitate the offsetting of investors’ orders and contribute to the best execution of such orders.” See 15 U.S.C. 78k–1(a)(1)(B), (D).

⁴ See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37497 (June 29, 2005) (“Regulation NMS Adopting Release”). In the nearly fifty years since the enactment of section 11A, the Commission has monitored the national market system and its operation and has periodically reviewed certain of its rules to address issues that have arisen in the markets with the goal of ensuring that the regulatory framework continues to fulfill the goals of section 11A. In each such case, the Commission has been guided by the objectives embodied in section 11A. The Commission also formed the Equity Market Structure Advisory Committee (“EMSAC”) in 2015 to provide diverse perspectives on the structure and operations of the U.S. equities markets, as well as advice and recommendations on matters related to equity market structure. The archives of these meetings are available at <https://www.sec.gov/spotlight/emsac/emsac-archives.htm> (“EMSAC Archives”).

⁵ See Regulation NMS Adopting Release, *supra* note 4, at 37498. “NMS stock” is defined under Regulation NMS as any NMS security other than an option. 17 CFR 242.600(b)(65). An “NMS security” is defined as any security or class of securities for

In 2005, the Commission adopted Regulation NMS to modernize and strengthen the regulatory structure of U.S. equity markets, including requirements pursuant to which quotations and orders for NMS stocks, and the markets on which they trade, can compete. These requirements support the public interest and the protection of investors and help to ensure fair and orderly markets for the execution of orders in NMS stocks. Among other things, Regulation NMS provides explicit requirements for the tick sizes of quotations and orders,⁶ the means for market participants to access quotations in the national market system, including a cap on the highest permitted level of fees a trading center may charge for access to the best quotations of a trading center,⁷ and how information about quotations and trades is made widely available to investors, among others.⁸

Nearly two decades later, the technology and economics of trading have evolved significantly. Transaction volume in listed equities doubled in the last five years and tripled in the last seventeen.⁹ Electronic trading now dominates equity markets, with latency measured in microseconds. These changes call for improvements to assure an efficient and transparent price discovery process, in order to continue to fulfill Congress’s directive and advance the objectives of investor protection and the maintenance of fair and orderly markets. However, some parts of Regulation NMS have not been revised since their 2005 adoption. Thus, the Commission is adopting the below described amendments to certain rules under Regulation NMS.¹⁰ The following

which transaction reports are collected, processed, and made available pursuant to an effective transaction reporting plan, or an effective national market system plan for reporting transactions in listed options. 17 CFR 242.600(b)(64).

⁶ See Rule 612 of Regulation NMS; 17 CFR 242.612.

⁷ See Rule 610 of Regulation NMS; 17 CFR 242.610.

⁸ See Rules 601, 602, and 603 of Regulation NMS; 17 CFR 242.601, 17 CFR 242.602, 17 CFR 242.603.

⁹ See Cboe, “Historical Market Volume Data,” available at https://www.cboe.com/us/equities/market_statistics/historical_market_volume/.

¹⁰ The Commission has amended several aspects of Regulation NMS to address and reflect changes in the markets since its adoption. For example, in 2018, the Commission adopted new order handling disclosure requirements in Rule 606 in response to changes in equity market structure and order handling and routing practices. See Securities Exchange Act Release No. 84528 (Nov. 2, 2018), 83 FR 58338 (Nov. 19, 2018). In 2020, the Commission adopted rules to update the national market system for the collection, consolidation, and dissemination of equity market data in the national market system to keep pace with technological developments concerning the use of market data. See Securities

Continued

subsections provide an overview of the amendments and the rationales for each.¹¹

A. Rule 612 Minimum Pricing Increments

1. Background

One way that investors can buy or sell a stock is through the use of limit orders, which are a type of order that specifies the price (“limit price”) at which the investor is willing to buy or sell a security.¹² Limit orders serve a critical market function by helping to set prices at which market participants are willing to trade, revealing the supply and demand for a security, and providing liquidity to the market. As such, limit orders play a key role in price discovery and allow investors to participate in the price-setting process.¹³

Recognizing the value of limit orders, the Commission adopted Rule 612 under Regulation NMS, which requires that the prices of quotations and orders in the national market system be reflected in a specified minimum pricing increment, also known as the

“tick size.” Rule 612 required, for quotations and orders of NMS stocks priced at or greater than \$1.00 per share, the minimum pricing increment to be \$0.01.¹⁴ As a result, subject to certain exceptions,¹⁵ the quotations and orders of such NMS stocks are priced in penny increments: \$10.00, \$10.01, \$10.02, for example.

The Commission adopted Rule 612 and minimum pricing increments to address the concern that a market participant could gain priority over existing limit orders by posting an economically insignificant price improvement.¹⁶ For example, consider a market participant that posts a limit order to buy an NMS stock at \$10.00 per share. Without minimum pricing increments, a second market participant could “step ahead” (also known as “penny”) of the first market participant by posting a bid to buy at a price that is higher by an infinitesimally small amount, such as \$10.000001.¹⁷ This behavior disincentivizes market participants from posting a limit order in the first place because another market participant could always gain priority over that first price by posting a limit order that is better by an economically insignificant amount.¹⁸ This may lead to a decline in limit orders, harm liquidity, and make it more costly to trade.¹⁹ This hypothetical scenario illustrates the need for a minimum pricing increment that is not too small.

Too big of a minimum pricing increment is also problematic since it would reduce the quality of price discovery by precluding price

competition for providing liquidity.²⁰ More specifically, too large a tick size can increase transaction costs for investors by artificially widening the “bid-ask spread”—the difference between the bid (highest price a buyer is willing to pay) and the ask (the lowest price a seller is willing to accept) prices.²¹ For example, consider a hypothetical scenario where a liquidity provider is willing to bid \$10.121 to buy a stock and offer \$10.124 to sell the stock. If the tick size were \$0.005, the resulting bid and offer from this liquidity provider would be \$10.120 and \$10.125, respectively, with a spread of \$0.005. If the tick size were \$0.01, the corresponding bid and offer would be \$10.120 and \$10.130, with a spread of \$0.01.²² In other words, but for the requirement under Rule 612 that sets the tick size to be \$0.01 for quotes and orders in NMS stocks priced at or above \$1.00, a smaller tick size would have narrowed spreads in some instances and allowed prices to better reflect the underlying economics for certain NMS stocks. As explained below, up to 74.3% of the share volume transacted in NMS stocks in 2023 may have bid-ask spreads that are constrained by the current minimum pricing increments.²³ These widened bid-ask spreads increase transaction costs for investors.²⁴ Conversely, a smaller tick size that allows for narrower bid-ask spreads would benefit investors by reducing transaction costs.²⁵

The minimum pricing increments in Rule 612 were adopted in 2005, when the Commission adopted Regulation NMS, and it was an adjustment in a long series of adjustments to the minimum pricing increments over time. For many decades, the U.S. equity markets used fractions of a dollar as minimum pricing increments (e.g., $\frac{1}{8}$, $\frac{1}{16}$, and $\frac{1}{32}$ of a dollar).²⁶ Prior to 1997, the minimum

Exchange Act Release No. 90610 (Dec. 9, 2020), 86 FR 18596 (Apr. 9, 2021) (“MDI Adopting Release”). More recently, responding to changes in market conditions caused by technological advancements and the increased participation of individual investors in the equity markets, the Commission adopted amendments to Rule 605 under Regulation NMS to update the disclosure of order execution quality statistics reports. *See* Securities Exchange Act Release No. 99679 (Mar. 6, 2024), 89 FR 26428, 26429 (Apr. 15, 2024) (“Rule 605 Amendments”) (adopting amendments to rule 605 under Regulation NMS to update reports on execution quality).

¹¹ *See generally* Securities Exchange Act Release No. 96494 (Dec. 14, 2022), 87 FR 80266 (Dec. 29, 2022) (“Proposing Release” or “Regulation NMS Proposal”).

¹² Whether a limit order can be executed immediately depends on the limit price in relation to the current market price. For example, a buy order with a limit price of \$10.00 means the investor would like to buy as soon as possible, but only when the current market price is at \$10.00 or less. By contrast, a “market order” is a type of order by which the investor specifies that it wishes to buy or sell a security at the current market price, regardless of what the market price is. *See generally*, Securities Exchange Act Release No. 96495 (Dec. 14, 2022), 88 FR 128, 132–33 (Jan. 3, 2023); Regulation NMS Adopting Release, *supra* note 4, at 37505 n.53.

¹³ Limit orders may be “marketable” meaning that its specified price allows an immediate execution because it matches a contra-side order, or they may be “non-marketable” meaning that its specified price does not allow for an immediate execution and therefore it must wait until a contra-side order comes in to trade with it. Non-marketable limit orders that are submitted to an exchange are placed on the order book and, if displayable, the price and size will be displayed in the national market system if it is the best priced order to buy or sell for such exchange. The Commission has recognized displayed limit orders as “a critically important element of efficient price discovery.” *See* Regulation NMS Adopting Release, *supra* note 4, at 37517.

¹⁴ *See* preexisting 17 CFR 242.612(a). For quotations and orders of NMS stocks priced less than \$1.00 per share, Rule 612 required the minimum pricing increment to be \$0.0001. *See* preexisting 17 CFR 242.612(b). However, most exchanges require stocks listed on their exchanges to maintain a price greater than \$1.00 per share, and consequently \$0.01 is the prevailing tick size for most quotes and orders for NMS stocks. *See infra* section VII.C.1.a.

¹⁵ *See infra* section VII.C.1.a. (discussing retail programs).

¹⁶ When Rule 612 was adopted, the Commission stated that “[l]reater use of limit orders will increase price discovery and market depth and liquidity” and that “if orders lose execution priority because competing orders step ahead for an economically insignificant amount, liquidity could diminish.” *See* Regulation NMS Adopting Release, *supra* note 4, at 37505, 37553. The Commission was concerned that stepping ahead of displayed limit orders by insignificant amounts would deter the submission and display of limit orders, which would negatively impact price discovery and market depth and liquidity. *See id.* at 37553. *See also infra* section VII.A (discussing the importance of minimum pricing increments).

¹⁷ But with the minimum pricing increment of a penny, that same market participant would be required to post a bid of \$10.01 instead.

¹⁸ *See infra* sections VII.A, VII.B.2, and VII.D.1.

¹⁹ *See infra* sections VII.A, VII.B.2, and VII.D.1.b.i for additional analysis of pennyng.

²⁰ *See infra* section VII.B.2.

²¹ *See infra* section VII.B.2; *see also* 17 CFR 242.600(b)(16).

²² *See infra* section VII.B.2 (providing a similar example showing how a minimum pricing increment could double the width of a bid-ask spread).

²³ *See infra* section VII.C.1.b (discussing percentage of share volume likely to be tick-constrained). *See also infra* section VII.B.2 (discussing the definition of “tick-constrained”).

²⁴ *See infra* section VII.B.2.

²⁵ *See infra* section VII.B.2.

²⁶ *See* Staff Report to Congress on Decimalization, Commission (July 2012) (“Staff Decimalization Report”), available at <https://www.sec.gov/files/decimalization-072012.pdf>, at 4. Staff reports, Investor Bulletins, and other staff documents (included those cited herein) represent the views of Commission staff and are not a rule, regulation, or statement of the Commission. The Commission has neither approved nor disapproved the content of these staff documents, and, like all staff documents, they have no legal force or effect, do not alter or

pricing increment on the New York Stock Exchange LLC (“NYSE”) for stocks above \$1.00 per share was $\frac{1}{8}$ of a dollar (or 12.5 cents).²⁷ In 1997, NYSE and the Nasdaq Stock Market LLC (“Nasdaq”) revised their rules to use the minimum pricing increment of $\frac{1}{16}$ of a dollar (6.25 cents).²⁸ In January 2000, the Commission mandated decimal pricing (*i.e.*, moving from fractional increments to penny increments) in certain securities,²⁹ and by April 2001, the market had fully converted to decimal pricing.³⁰

Up to this point, minimum pricing increments for NMS stocks were set by the individual trading venues. But in 2004, as part of Regulation NMS and pursuant to the authority under the 1975 Amendments, the Commission proposed Rule 612 to implement market-wide uniform minimum pricing increments for quoting in NMS stocks.³¹ The Commission stated that, while the benefits of decimal pricing had justified the costs, there was a potential for costs to investors and the markets to surpass the benefits if the minimum pricing increment decreased beyond a certain level, and the proposed rule was designed to address the scenario where market participants attempt to step ahead of competing limit orders at the smallest economic increment possible.³² Thus, the Commission adopted Rule 612 in 2005, which established the minimum pricing increments of \$0.01 for quotations and orders of NMS stocks priced at, or greater than, \$1.00 per share, and \$0.0001 for quotations and orders of NMS stocks priced under

\$1.00 per share. The Commission stated that, at the time, it did not believe that the potential benefits of marginally better prices offered by allowing sub-penny quoting in securities were likely to justify the costs of permitting such quotes.³³

When the Commission adopted Rule 612 in 2005, it acknowledged that the markets could evolve over time and shift the balance of the costs and benefits of the adopted tick size.³⁴ Two decades later, the market has evolved considerably, and amendments to Rule 612 are necessary to continue to further the objectives of the Exchange Act. Data analysis shows that stocks with sufficiently narrow bid-ask spreads would trade better, namely it would be easier and less costly for investors to transact, if they were allowed to quote at increments smaller than one penny.³⁵ Indeed, for these stocks, the risks of “stepping ahead” are lowered while the benefits of greater price competition from relaxing the “tick constraint” are greater.³⁶

2. Proposed and Adopted Amendments

Accordingly, the Commission proposed amendments to Rule 612 to introduce three minimum pricing increments that were less than \$0.01 (*i.e.*, \$0.005, \$0.002, \$0.001) for quotes and orders priced \$1.00 or more for certain NMS stocks based upon each stock’s time weighted average quoted spread (“TWAQS”).³⁷ The proposed amendments would have assigned sub-penny minimum pricing increments to any NMS stock that had a TWAQS of \$0.04 or less. This proposed amendment was designed to address the issues related to tick-constrained stocks described above that have arisen since 2005. The Commission also proposed to impose these minimum pricing increments for trades, subject to certain exceptions.

As explained below, in response to commenters, the Commission is adopting modified amendments to Rule 612 to introduce one minimum pricing increment that is less than \$0.01, *i.e.*, \$0.005, for quotes and orders priced \$1.00 or more for NMS stocks that have

a TWAQS of \$0.015 or less.³⁸ The Commission is not adopting a minimum pricing increment for trades.³⁹

B. Rule 610 Fees for Access to Quotations and Transparency of Fees

1. Background

Trading centers⁴⁰ can choose to charge an access fee, or pay a rebate, to the participants—liquidity providers (market participants with orders resting at the trading center) and liquidity takers (market participants who submit incoming orders to execute against orders resting at the trading center)—who trade at their venue. As discussed in section VII.C.2.b, the predominant exchange fee structure is maker-taker, in which an exchange charges a fee to liquidity takers and pays a rebate to liquidity providers, and the rebate is typically funded through the access fee.⁴¹

As adopted in 2005, Rule 610(c) set the access fee cap for protected quotations⁴² priced at \$1 or more at 30 cents per 100 shares (“30 mils” per share) for NMS stocks. Rule 610(c) also applies to any other quotation of a trading center that is the best bid or offer of an exchange or association.⁴³ The access fee cap was based, in part, upon the prevailing fees that were charged by certain trading centers at that time.⁴⁴ For NMS stocks priced below \$1, the fee cap was set at 0.3% of the quotation price.⁴⁵ Rule 610 was adopted at the same time as Rule 611, the Order Protection Rule, which established intermarket protection

amend the applicable law, and create no new or additional obligations for any person.

²⁷ See Self-Regulatory Organizations; New York Stock Exchange, Inc.; Order Granting Approval to Proposed Rule Change Relating to Trading Differentials for Equity Securities, 62 FR 42847, 42848 n.5 (Aug. 8, 1997). See also Division of Market Regulation, Market 2000: An Examination of Current Equity Market Developments (1994), available at <https://www.sec.gov/divisions/marketreg/market2000.pdf>, at 37–38, fn. 43 (describing NYSE’s tick size of $\frac{1}{8}$ of a dollar in 1994).

²⁸ See Staff Decimalization Report, *supra* note 26, at 4–5.

²⁹ See Securities Exchange Act Release No. 42360 (Jan. 28, 2000), 65 FR 5003 (Feb. 2, 2000).

³⁰ See Staff Decimalization Report, *supra* note 26, at 5–6.

³¹ See Securities Exchange Act Release No. 49325 (Feb. 26, 2004), 69 FR 11126, 11171 (Mar. 9, 2004) (“2004 Regulation NMS Proposing Release”) (“the Commission is proposing a rule that would prohibit every national securities exchange, national securities association, ATS (including ECNs), vendor, broker or dealer from ranking, displaying, or accepting from any person a bid or offer, an order, or an indication of interest in any NMS stock in an increment less than \$0.01.”).

³² See Regulation NMS Adopting Release, *supra* note 4, at 37551–52 (citing 2004 Regulation NMS Proposing Release at 11165).

³³ See Regulation NMS Adopting Release, *supra* note 4, at 37553 (“Even assuming that quoting in sub-penny increments would reduce spreads, the Commission continues to believe, on balance, that the costs of sub-penny quoting are not justified by the benefits.”).

³⁴ *Id.* (“Nevertheless, the Commission acknowledges the possibility that the balance of costs and benefits could shift in a limited number of cases or as the markets continue to evolve.”).

³⁵ See *infra* section VII.D.1.

³⁶ See *infra* sections VII.B.2 and VII.D.1.b.

³⁷ See Proposing Release, *supra* note 11, at 80280.

³⁸ See *infra* section III.C.

³⁹ See *infra* section III.D.

⁴⁰ 17 CFR 242.600(b)(106) (providing a definition of the term “trading center”). This discussion focuses on exchange fees because, currently, exchanges are the only trading centers that have quotations that are subject to the access fee caps under Rule 610(c). See *infra* note 367.

⁴¹ See also *infra* sections VII.B.3 and VII.C.2.c, table 5 and table 6 (showing the predominance of both dollar and share exchange trading volume occurs on maker-taker venues).

⁴² 17 CFR 242.610(c). A protected quotation is defined in Rule 600(b)(82) as “a protected bid or protected offer.” 17 CFR 242.600(b)(82). A protected bid or protected offer is defined as “a quotation in an NMS stock that: (i) Is displayed by an automated trading center; (ii) Is disseminated pursuant to an effective national market system plan; and (iii) Is an automated quotation that is the best bid or best offer of a national securities exchange, or the best bid or best offer of a national securities association.” 17 CFR 242.600(b)(81).

⁴³ For purposes of this discussion, references to protected quotations under Rule 610(c) also include manual quotations that are the best bid or best offer of an exchange or association.

⁴⁴ See Regulation NMS Adopting Release, *supra* note 4, at 37545.

⁴⁵ See Regulation NMS Adopting Release, *supra* note 4, at 37544 n.406.

against trade-throughs⁴⁶ for all NMS stocks. Rule 610(c) was designed to preclude trading centers that posted protected quotations from raising their fees in an attempt to take improper advantage of the trade-through protections adopted under Rule 611.⁴⁷ The Commission designed the access fee caps to preserve the benefits of both the strengthened price protection under Rule 611 and the more efficient linkages among trading centers that were developed under Regulation NMS to access protected quotations because the benefits could be compromised if substantial fees were charged.⁴⁸

Since an access fee that is too high when compared to the tick size can create pricing distortions, the access fee caps need to be adjusted in conjunction with the reduction in tick size to prevent such distortions.⁴⁹ In addition, as discussed below, many exchanges charge the maximum fee allowed to access protected quotes, and primarily use those fees to pay rebates to market participants that provide liquidity.⁵⁰ This practice raises a number of concerns and may interfere with section 11A's objectives of ensuring the fairness and usefulness of quotation information.⁵¹

First, the actual prices, inclusive of fees and rebates, for investors and other market participants to trade a stock are not fully transparent. In general, the higher the permitted level of access fees, the higher the rebates, and the greater the potential discrepancy between displayed quoted prices on the one hand, and actual prices on the other.⁵²

Furthermore, exchanges' use of fees and rebates creates a potential conflict of interest between broker-dealers and their customers with respect to broker-

dealer order routing, by providing incentives for a broker-dealer to route customer orders to certain exchanges to receive higher rebates or avoid higher fees based on their own economic interest.⁵³ This potential conflict of interest is exacerbated if broker-dealers do not fully pass on the fees and rebate to their customers, since rebate-seeking by broker-dealers may come at the cost of execution quality of customers.⁵⁴ In addition, exchanges use complex fee schedules. Generally, the higher the access fee cap, the wider the range of possible fees and rebates, which results in more complex pricing schedules. Such complexity makes it more costly for market participants to design and implement order execution strategies.

Finally, exchanges' fee and rebate schedules are typically calculated at month's end, which requires market participants to make trading decisions without the ability to determine their full trading costs at the time of execution.⁵⁵ In turn, this lack of transparency impedes a market participant's ability to evaluate fully where to send its orders because the market participant cannot calculate the fees and rebates that will apply to the order contemporaneous with execution.⁵⁶ Concerns with such lack of price transparency are exacerbated when various exchanges have different fee schedules, as it is difficult for market participants to compare net prices across markets.

2. Proposed and Adopted Amendments

Accordingly, the Commission proposed to amend Rule 610 in two ways. First, to accommodate the proposed smaller minimum pricing increments under proposed Rule 612, as well as to address the distortions that have developed under the access fee caps, the Commission proposed to reduce Rule 610(c)'s 30 mil cap for executions against protected quotations priced \$1.00 or more as follows: a \$0.001 (or 10 mils) access fee cap for NMS stocks that would have been assigned a minimum pricing increment larger than \$0.001; and a \$0.0005 (or 5 mils) access fee cap for NMS stocks that would have been assigned a \$0.001 minimum pricing increment. For protected quotations in NMS stocks priced under \$1.00 per share, the Commission proposed to reduce the 0.3% fee cap to 0.05% of the quotation price.

As discussed in detail below, in response to comments, the Commission is adopting amendments to Rule 610(c) with modifications from the proposal. Specifically, in light of the amendments to Rule 612, the Commission is adopting only the proposed 10 mil per share access fee cap for all protected quotations priced \$1.00 or more.⁵⁷ For protected quotations priced less than \$1.00, the Commission is adopting an access fee cap of 0.1% of the quotation price per share.⁵⁸ As discussed in section VII.D.2.b, the adopted amendments to the access fee caps will not impede the ability of exchanges to fund their execution services.

Second, to facilitate the ability of market participants to understand and calculate the total price of transactions at the time of execution, the Commission proposed an amendment to Rule 610 to add subpart (d) to require that all exchange fees charged, and rebates paid, for the execution of an order in an NMS stock be determinable at the time of execution. As discussed in detail below, the Commission is adopting Rule 610(d) as proposed.

C. Transparency of Better Priced Orders

1. Background

The widespread availability of timely information with respect to quotations for and transactions in NMS stocks ("NMS information") is critical to the ability of market participants to participate effectively in the U.S. securities markets.⁵⁹ NMS information is currently disseminated within the national market system by the exclusive plan processors ("exclusive securities information processors" or "SIPs").⁶⁰

⁵⁷ See *infra* section IV.D.

⁵⁸ See *id.*

⁵⁹ NMS information is made widely available to investors through the national market system and "serves an essential linkage function by helping to assure that the public is aware of the best displayed prices for a stock, no matter where they may arise in the national market system." See Securities Exchange Act Release No. 61358 (Jan. 14, 2010), 75 FR 3594 (Jan. 21, 2010) ("Concept Release on Equity Market Structure") at 3600. The availability of NMS information also "enables investors to monitor the prices at which their orders are executed and assess whether their orders received best execution." *Id.*

⁶⁰ There are three effective national market system plans that govern the collection, consolidation, processing and dissemination of quotation and transaction information for NMS stocks: the Consolidated Tape Association Plan ("CTA Plan"); the Consolidated Quotation Plan ("CQ Plan"); and the Joint Self-Regulatory Organization Plan Governing the Collection, Consolidation, and Dissemination of Quotation and Transaction Information for Nasdaq-Listed Securities Traded on Exchanges on an Unlisted Trading Privileges Basis ("UTP Plan") (together the "Equity Data Plans"). Currently, the Securities Industry Automation Corporation ("SIAC," an affiliate of the NYSE) is the exclusive SIP for the CTA and CQ Plans, and Nasdaq is the exclusive SIP

⁴⁶ A trade-through occurs when a trading center executes an order at a price that is inferior to the price of a protected quotation that is displayed by another trading center. See 17 CFR 242.600(b)(105) for the definition of trade-through under Regulation NMS.

⁴⁷ See Regulation NMS Adopting Release, *supra* note 4, at 37544 and 37595.

⁴⁸ See Regulation NMS Adopting Release, *supra* note 4, at 37544.

⁴⁹ See *infra* sections IV.D.1 and VII.D.2.a. See also Proposing Release, *supra* note 11, at 80348 (stating "the access fee cap should not be greater than 1/2 of the tick size in order to preserve coherence between net and nominal price rankings of trading venues.").

⁵⁰ See *infra* sections VII.B.3 and VII.C.2.

⁵¹ See *infra* sections IV.D.1 and VII.B.3. See also Regulation NMS Adopting Release, *supra* note 4, at 37545 ("For quotations to be fair and useful, there must be some limit on the extent to which the true price for those who access quotations can vary from the displayed price.").

⁵² See *infra* sections IV.B.2, VII.D.2, and VII.E.1. In certain cases, the disparity between market quotations and actual transaction costs may be substantial. See, e.g., Proposing Release, *supra* note 11, at 80328.

⁵³ See *infra* sections IV.B.2, IV.D and VII.D.3.

⁵⁴ See text accompanying *infra* note 1518.

⁵⁵ See *infra* sections IV.E, VII.C.2, and VII.D.3.

⁵⁶ See *infra* sections IV.E, VII.C.2, and VII.D.3.

In 2020, the Commission adopted amendments to Regulation NMS to modernize the NMS information provided within the national market system for the benefit of market participants and to better achieve section 11A's goals of assuring "the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities that is prompt, accurate, reliable, and fair" ("MDI Rules").⁶¹ In light of delays in the implementation of the MDI Rules, the Commission is accelerating the implementation of the round lot and odd-lot information definitions adopted as part of the MDI Rules so that investors will benefit sooner from greater transparency and accessibility of better priced orders⁶² and improved ability to assess the execution quality of their orders, as explained below.⁶³

Until the full implementation of the MDI Rules, NMS information disseminated within the national market system by the exclusive SIPs includes, for each NMS stock, the price, size, and exchange of each last sale, each exchange's current highest bid and lowest offer and the shares available at those prices (the best bid and best offer or "BBO"), the national best bid and national best offer ("NBBO"), odd-lot⁶⁴ transaction information, and certain regulatory and administrative data ("SIP data").⁶⁵ Information on NMS stock quotations is provided in round lots, and, until the round lot definition adopted in the MDI Rules is implemented, round lots are defined in rules of the exchanges.⁶⁶ For most NMS

stocks, exchange rules define a round lot as 100 shares.⁶⁷ Market participants interested in quotation data for orders that have a size less than a round lot, *i.e.*, odd-lots, must purchase individual exchange proprietary feeds.⁶⁸ This odd-lot order information is highly relevant to market participants, including for investors who trade small numbers of shares.

The MDI Rules expanded the NMS information that will be made available for dissemination within the national market system in order to increase transparency about better prices available in the market.⁶⁹ The Commission, in the MDI Rules, amended Regulation NMS to include a definition of "round lot" that assigns each NMS stock to a round lot size based on the stock's average closing price. The round lot definition, once implemented, will increase transparency about smaller sized orders in higher priced stocks by assigning NMS stocks priced over \$250 to round lot sizes that are less than the predominant 100 shares.⁷⁰ The Commission also adopted a definition of odd-lot information as part of the MDI Rules.⁷¹ Once implemented, information regarding the prices and sizes of odd-lot orders priced better than the NBBO will be made available within the national market system and is expected to be made widely available to investors.⁷²

exchange, or the primary listing exchange for the stock, discretion to define it otherwise. *See, e.g.*, NYSE Rule 7.5 ("A 'round lot' is 100 shares, unless specified by the primary listing market to be fewer than 100 shares.").

⁶⁷ According to NYSE Trade and Quote ("TAQ") Data, as of Nov. 28, 2023, 11 NMS stocks have a round lot size other than 100. Nine NMS stocks have a round lot size of 10 and two NMS stocks have a round lot size of one share.

⁶⁸ See Proposing Release, *supra* note 11, at 80294; MDI Adopting Release, *supra* note 10, at 18599.

⁶⁹ See Proposing Release, *supra* note 11, at 80270.

⁷⁰ 17 CFR 242.600(b)(93). In the MDI Adopting Release, the Commission stated that "[d]efining smaller-sized orders in higher-priced stocks as round lots, in addition to providing transparency into such quotations, ensures that these smaller-sized orders can establish the [national best bid and national best offer], receive order protection, and invoke the applicability of several other rules under Regulation NMS." See MDI Adopting Release, *supra* note 10, at 18613.

⁷¹ Preexisting 17 CFR 242.600(b)(69). "Odd-lot information" is defined as (1) odd-lot transactions, and (2) odd-lots at a price greater than or equal to the national best bid and less than or equal to the national best offer, aggregated at each price level at each national securities exchange and national securities association. *Id.*

⁷² The Commission stated that the inclusion of this odd-lot quotation information would allow market participants "to trade in a more informed and effective manner," and that "the new definition of round lot and the increased availability of better priced odd-lot information will provide investors with valuable information about the best prices

For the reasons explained in the MDI Adopting Release, the MDI Rules sequenced the implementation of these definitions in the later stages of the implementation schedule.⁷³ The implementation of the MDI Rules began with the filing of amendments to the effective national market system plan(s) as required under Rule 614(e) ("MDI Plan Amendments").⁷⁴ The Operating Committees of the CTA/CQ Plan and UTP Plan⁷⁵ filed the proposed MDI Plan Amendments on November 5, 2021,⁷⁶ which the Commission disapproved.⁷⁷ As a result, the participants to the effective national market system plan(s) will need to develop and file new proposed amendments pursuant to Rule 608.⁷⁸

available and help to facilitate more informed order routing decisions and the best execution of investor orders." See MDI Adopting Release, *supra* note 10, at 18602 and 18613. Unlike orders in the round lot sizes adopted pursuant to the MDI Rules, odd-lots are not "protected quotations." See 17 CFR 242.600(b)(16), (81), (82).

⁷³ See MDI Adopting Release, *supra* note 10, at 18698. Pursuant to the implementation schedule of the MDI Rules, the round lot definition was set to be implemented as part of the last phase and odd-lot quotation information was set to be implemented during a "parallel operation period." See *id.* at 18700–01. As originally adopted, during the parallel operation period, the exclusive SIPs would have continued to disseminate the data that they currently disseminate and competing consolidators would have been permitted to offer consolidated market data products, including odd-lot information. Because the round lot definition would have been implemented during a later phase, the exclusive SIPs and competing consolidators would have collected, consolidated and disseminated NMS information based on then current exchange definitions of round lot. *Id.* at 18699–18701.

⁷⁴ 17 CFR 242.614(e). The Commission's approval of amendments to the effective national market system plan(s) filed pursuant to rule 614(e) will be the starting point for the rest of the MDI Rules implementation schedule, which includes a 180-day development period, during which competing consolidators can register with the Commission, and ends with the cessation of the operations of the exclusive SIPs and testing and implementation of the changes necessary to implement the round lot definition. See MDI Adopting Release, *supra* note 10, at 18699–701; Proposing Release, *supra* note 11, at 80295.

⁷⁵ See *supra* note 60.

⁷⁶ See Securities Exchange Act Release Nos. 93615 (Nov. 19, 2021), 86 FR 67800 (Nov. 29, 2021); 93625 (Nov. 19, 2021), 86 FR 67517 (Nov. 26, 2021); 93620 (Nov. 19, 2021), 86 FR 67541 (Nov. 26, 2021); 93618 (Nov. 19, 2021), 86 FR 67562 (Nov. 26, 2021).

⁷⁷ See Securities Exchange Act Release Nos. 95848 (Sept. 21, 2022), 87 FR 58544 (Sept. 27, 2022); 95849 (Sept. 21, 2022), 87 FR 58592 (Sept. 27, 2022); 95850 (Sept. 21, 2022), 87 FR 58560 (Sept. 27, 2022); 95851 (Sept. 21, 2022), 87 FR 58613 (Sept. 27, 2022).

⁷⁸ On Sept. 1, 2023, the Commission ordered the exchanges and the Financial Industry Regulatory Authority, Inc. ("FINRA") to file a new single national market system plan regarding consolidated equity market data. See Securities Exchange Act Release No. 98271, 88 FR 61630 (Sept. 7, 2023). On Jan. 19, 2024, the Commission published notice of filing of a National Market System Plan for

Continued

for the UTP Plan. See MDI Adopting Release, *supra* note 10, at 18728. Each exclusive SIP is the plan processor for one of the Equity Data Plans.

⁶¹ See MDI Adopting Release, *supra* note 10.

⁶² "Better priced orders" refers to orders that are priced superior to the national best bid and national best offer but are not included in NMS information because they consist of too few shares. See *infra* notes 66–68 and accompanying text. The MDI Rules' round lot and odd-lot information definitions will allow better priced orders to be included in NMS information so that market participants that subscribe to the exclusive SIP feeds (that otherwise would not be able to view these orders without purchasing exchange proprietary feeds) will be able to view and access these orders.

⁶³ See *infra* sections V.C.1.a and VII.D.4.

⁶⁴ Odd-lot is defined in Rule 600(b)(68) as an order for the purchase or sale of an NMS stock in an amount less than a round lot. 17 CFR 242.600(b)(68).

⁶⁵ See Proposing Release, *supra* note 11, at 80294. Under the decentralized consolidation model established by the MDI Rules, NMS information will consist of "consolidated market data," as defined in the MDI Rules. 17 CFR 242.600(b)(24).

⁶⁶ See Proposing Release, *supra* note 11, at 80294 n.328. A "round lot" is not defined in the Exchange Act and, prior to the MDI Rules, it was not defined in Regulation NMS. Exchange rules typically define a round lot as 100 shares, but they also allow the

2. Proposed and Adopted Amendments

In light of the delays in the implementation of the MDI Rules, the Commission proposed to accelerate the implementation of the round lot and odd-lot information definitions, to allow investors to benefit sooner from greater transparency and accessibility of better priced orders and improved execution quality.⁷⁹ As discussed further below, the Commission is accelerating the implementation of the round lot and odd-lot information definitions but is providing the industry with more time to make the necessary systems changes to implement these definitions than what was proposed.⁸⁰

Additionally, the Commission proposed to amend the definition of odd-lot information to include a new data element for the best odd-lot orders available in the market, which would be made available to investors broadly. The Commission is adopting the best odd-lot order to buy and the best odd-lot order to sell as part of odd-lot information as proposed.⁸¹

D. Overarching Comments on the Proposing Release

The Commission received comments from a variety of market participants on the Proposing Release.⁸²

Many commenters broadly supported the Regulation NMS Proposal.⁸³ Two

commenters urged the Commission to promptly adopt the Regulation NMS Proposal.⁸⁴ One commenter urged the Commission to revise and adopt the Rule 605 Proposal as well as the Regulation NMS Proposal without delay.⁸⁵ Another commenter suggested that the Commission prioritize the adoption of the Regulation NMS Proposal⁸⁶ stating that, of the four EMS Proposals related to equity market structure, the Regulation NMS Proposal “is the least controversial and the least interdependent on the other three, and so is the easiest one for the Commission to move forward”⁸⁷ and “has garnered the most consensus and support from various market participants.”⁸⁸

definition are important steps towards promoting fair and transparent pricing across trading venues.”); Keith Noble dated Apr. 1, 2023; Chris Miller dated Apr. 1, 2023; Kristen Palmer dated Apr. 1, 2023; Amanda Kappes dated Apr. 1, 2023; Ian Rohel, dated Apr. 1, 2023; Riley Hume dated Apr. 1, 2023; Matt Kelleher dated Apr. 1, 2023; Keagan Wethington dated Mar. 31, 2023; J.W. Verret, Associate Professor, George Mason University Antonin Scalia Law School, dated Jan. 12, 2024 (“Verret Letter III”) at 26 (“... the proposed amendments to Reg NMS rules regarding minimum pricing increments and the proposed reforms to volume/access fees both support the core principles of free market economics and will lead to a more competitive, transparent, and efficient market landscape.”); Eric Budish, Paul G. McDermott Professor of Economics and Entrepreneurship, The University of Chicago Booth School of Business, dated Jan. 18, 2024 (“Budish Letter”) at 1 (“... this set of rules changes—primarily, a finer tick-size for tick-constrained stocks, a lower access fee cap, and harmonization of pricing increments for on-exchange and off-exchange trading—will reduce both investors’ costs and the overall complexity of U.S. equity markets.”); Stephen W. Hall, Legal Director and Securities Specialist, and Brady Williams, Legal Counsel, Better Markets, Inc., dated Mar. 31, 2023 (“Better Markets Letter I”) at 8–17; Joseph Saluzzi, Partner, Themis Trading LLC, dated Mar. 31, 2023 (“Themis Letter”) at 2–8; John Ramsay, Chief Market Policy Officer, Investors Exchange LLC, dated Mar. 20, 2023 (“IEX Letter I”); Letter Type A, of which 22 comments were received; Letter Type C, of which 5 comments were received; Letter Type D, of which 255 comments were received; Letter Type E, of which 14 comments were received; Letter Type G, of which 652 comments were received; Letter Type H, of which 853 comments were received; Letter Type I, of which 22 comments were received; Letter Type J, of which 15 comments were received; Letter Type K, of which 22 comments were received; and Letter Type L, of which 4 comments were received; available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>.

⁸⁴ See, e.g., Letters from Tyler Gellasch, President & CEO, Healthy Markets Association, dated Mar. 31, 2023 (“Healthy Markets Letter I”) at 28, 31; J. W. Verret, Associate Professor, George Mason University Antonin Scalia Law School, dated Sept. 20, 2023 (“Verret Letter I”) at 1–2, 4, 5.

⁸⁵ See Healthy Markets Letter I at 28, 31.

⁸⁶ See Verret Letter I at 1.

⁸⁷ Verret Letter I at 1–2.

⁸⁸ See Verret Letter I at 2 (stating that the Regulation NMS Proposal is supported by “a wealth of prior work by the Commission in the form of a pilot tick size study, comments submitted to the SEC regarding the transaction fee pilot, and

Some commenters agreed that Rules 610 and 612 should be amended but recommended that the proposed amendments be modified and that the Commission consider more modest, incremental changes to minimize the possibility of unintended consequences and to enable the Commission and market participants to evaluate the impact of the changes on trading and execution quality.⁸⁹

The issues related to the amended rules have been considered by the Commission and market participants for several years.⁹⁰ Further, the Commission has analyzed data provided by market participants and conducted its own data analysis to inform the amendments that were included in the Proposing Release and in this release.⁹¹ The Commission has evaluated the national market system and its operation in light of changes in the market and has sought input from market participants throughout this process.⁹² After considering the comments, which are discussed in context below, the Commission is adopting amendments to these rules with certain modifications from the Proposing Release.

The Commission received several comments that addressed the interaction between the different individual proposed rule amendments that made up the Regulation NMS Proposal. One commenter stated that adopting the proposed changes to the minimum pricing increments in proposed Rule 612 along with the proposed acceleration of the round lot definition and the proposed access fee caps in Rule 610 “would impact the value of providing liquidity on public markets and consequently would raise costs for

numerous roundtables and proceedings of the SEC’s Investor Advisory Committee and SEC’s Equity Market Structure Advisory Committee.”).

⁸⁹ See, e.g., *infra* note 92.

⁹⁰ See, e.g., EMSAC Archives, *supra* note 4 (Rule 610 was considered at the EMSAC), *see also supra* note 4 (discussing the EMSAC); *infra* note 362 and accompanying text for a discussion of previous considerations of Rule 610. For a discussion of previous considerations of Rule 612, *see* Proposing Release, *supra* note 11, at 80272.

⁹¹ *See infra* sections V.B.1; V.B.3.b.iv and VII.D.

⁹² *See also* Proposing Release, *supra* note 11, at 80272 (discussing considerations of minimum pricing increments since Rule 612 was adopted) and 80287 (discussing considerations of access fee caps since Rule 610 was adopted). *See also* IEX Letter I at 5 (describing steps taken by the Commission since the adoption of Regulation NMS in 2005 to review the impact of Regulation NMS, including the solicitation of input from stakeholders, further stating, “[t]he history shows that the Commission’s current Proposals do not arise in a vacuum. In fact, the Commission has deliberately considered the views of multiple stakeholders over years of review, and its current Proposals grow out of and build on that ongoing review.”).

Consolidated Equity Market Data. *See* Securities Exchange Act Release No. 99403, 89 FR 5002 (Jan. 25, 2024). On April 23, 2024, the Commission instituted proceedings pursuant to Rule 608(b)(2)(i) of Regulation NMS to determine whether to approve or disapprove the proposed plan or to approve the proposed plan with any changes or subject to any conditions the Commission deems necessary or appropriate after considering public comment. *See* Securities Exchange Act Release No. 100017, 89 FR 33412 (Apr. 29, 2024). On July 11, 2024, the Commission extended the period within which to conclude proceedings regarding the proposed plan to 240 days from the date of publication of the notice. *See* Securities Exchange Act Release No. 100500 (Jul. 11, 2024), 89 FR 58235 (Jul. 17, 2024).

⁷⁹ *See* Proposing Release, *supra* note 11, at 80299; *see also infra* sections V.B.2. and V.C.1. In addition, as discussed below, the Commission is amending the definition of round lot so that the frequency of round lot changes will be consistent with the frequency of minimum pricing increment changes under amended Rule 612. *See infra* section V.B.3.b. The Commission is not changing the calculation used to assign round lots or the round lot tiers in the round lot definition adopted in the MDI Rules.

⁸⁰ *See infra* sections V.B.3, V.C.1, and V.I.C.

⁸¹ *See infra* section V.C.2.

⁸² The comment letters on the Proposing Release (File No. 7–30–33) are available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>.

⁸³ See, e.g., Letters from Mark Rogers dated Mar. 30, 2023 (“I approve of the proposed changes to Regulation NMS”); Omar Fakhro dated Mar. 28, 2023 (“I as a household investor strongly support this rule for a better and fair market for EVERYONE”); Danielle Ball dated Mar. 27, 2023 (“The proposed tick size regime, variable minimum pricing increment model, and revised round lot

investors,” and urged the Commission to review how these changes would together impact liquidity.⁹³ The Commission has considered the impact of the amendments on liquidity and does not believe that they will raise costs for investors.⁹⁴ On the contrary, as discussed further below, the amendments will enhance the ability of market participants to price their orders in a competitive manner, reduce the amount of fees for accessing protected quotations, help to ensure that exchange fees are knowable when an order is placed and provide transparency about orders in the market that are priced better than the NBBO. These changes will enhance the operation of the national market system and provide significant benefits to investors.

Another commenter stated that the Regulation NMS Proposal would increase “market data costs” because retail brokers would have to take in and store an increased amount of market data to comply with the changing minimum pricing increments, the MDI Rules’ round lot definition, and the odd-lot information requirements and to update their systems accordingly, and because the exclusive SIPs may cause third-party data vendors to require additional hardware to support higher message rates.⁹⁵ As discussed below,⁹⁶ the Commission is adopting amendments to the minimum pricing increments with modifications from the proposal, which will lessen the potential costs identified by the commenter. Specifically, the Commission is adopting one minimum pricing increment for a smaller universe of NMS stocks than was proposed and is reducing the frequency of minimum pricing increment updates from a quarterly to a semiannual basis.⁹⁷ While this additional minimum pricing

increment will likely require market participants to incur new technology costs to manage the new data, fewer changes are being adopted than were proposed and these changes are necessary and justified to address the issues related to constraints that have developed with the \$0.01 minimum pricing increment.⁹⁸ Further, the costs related to implementing the round lot definition were considered as part of the MDI Rules and the acceleration of the timing of implementation does not increase those costs. Although the Commission is modifying the round lot definition from the definition adopted in the MDI Rules, the modifications will reduce ongoing round lot implementation costs because round lots will be assigned less frequently, *i.e.*, from a monthly basis to a semiannual basis, which means that systems will have to be updated less frequently. Synchronizing the dates of the changes to round lots and minimum pricing increments should also lower ongoing implementation costs for market participants by potentially decreasing the number of updates needed for their trading systems.⁹⁹ Finally, the costs related to implementing the odd-lot information definition were considered in the Proposing Release.¹⁰⁰ The adopted amendments, which will result in fewer systems changes than anticipated in the Proposing Release, will result in lower implementation costs than were contemplated in the proposal¹⁰¹ and reduce the amount of data disseminated by the exclusive SIPs and any future competing consolidators as compared to what was contemplated in the Proposing Release.

One commenter stated that the implementation of various components of the Proposing Release at or around the same time (specifically access fees, minimum pricing increments and round lot sizes) could complicate the Commission’s ability to assess the impact of a specific change and “whether other consequences will ensue.”¹⁰² To the specific concerns of

this commenter, the Commission has carefully considered the interacting effects of access fees, minimum pricing increments, and round lot sizes, *see* section VII. While the Commission acknowledges that staging amendments may make them easier to study, the nature of the adopted amendments will still make such study possible, even if implemented together. Namely, the set of stocks for which the tick size change applies tends to differ from the set of stocks for which round lot changes apply.¹⁰³ Access fee changes apply to some stocks that will not be directly affected by either round lot reform or tick size changes. Further, staging the amendments would delay the significant benefits of the amendments.¹⁰⁴

Several commenters suggested implementing the proposed accelerated implementation of the round lot and odd-lot information definitions so that the effects of these definitions could inform other proposed changes.¹⁰⁵ Other commenters suggested that round lots should be implemented before the proposed changes to the minimum pricing increments, so that data based on the MDI Rules’ round lots could inform changes to the minimum pricing increments.¹⁰⁶

While the dissemination of odd-lot information will result in the display of narrower spreads based on odd-lots, the calculation of the TWAQS for determining minimum pricing

Structure Specialist, Global SPDR Business, State Street Global Advisors, dated Mar. 30, 2023 (“State Street Letter”) at 5 (suggesting that the amendments to reduce the access fee caps should be implemented before the minimum pricing increments to isolate the impact of the effects) and *infra* section VII.D.2.c (responding to the State Street Letter).

¹⁰³ *See infra* note 801 for analysis identifying only two stocks that would have qualified for both the tick reduction and a reduction in the round lot as of Nov. 30, 2023. *See also infra* section VII.D.4.a for a discussion of the small overlap of the round lot definition and the tick size change.

¹⁰⁴ *See, infra*, section II. The Commission recognizes that delaying the rule would likewise delay costs to affected parties.

¹⁰⁵ *See, e.g.*, Letters from Jennifer W. Han, Executive Vice President, Chief Counsel & Head of Global Regulatory Affairs, Managed Funds Association, dated Mar. 30, 2023 (“MFA Letter”) at 14; Sarah A. Bessin, Deputy General Counsel, and Nhan Nguyen, Assistant General Counsel, Investment Company Institute, dated Mar. 31, 2023 (“ICI Letter I”) at 2, 7; Gerald O’Reilly, Co-CEO and Chief Investment Officer, and Ryan Wiley, Global Head of Equity Trading, Dimensional Fund Advisors LP, dated Mar. 31, 2023 (“Dimensional Letter”) at 2.

¹⁰⁶ *See* Letter from Hubert De Jesus, Managing Director, Global Head of Market Structure and Electronic Trading, and Samantha DeZur, Managing Director, Global Public Policy Group, BlackRock, Inc., dated Mar. 31, 2023 (“BlackRock Letter”) at 17; Dimensional Letter at 2.

⁹³ *See* Letter from Naureen Hassan, President, UBS Americas, Robert Karofsky, President, UBS Investment Bank, and Suni Harford, President, UBS Asset Management, dated Mar. 31, 2023 (“UBS Letter”) at 10. *See infra* section V.B.3.b.i and section VII.D.4.a for discussions of the interaction between the round lot definition and the proposed changes to the minimum pricing increments.

⁹⁴ *See infra* section VII.D.4.a (explaining that the interaction of the reduction in tick size and the MDI Rules’ round lot definition would not have a material impact on the NBBO for affected stocks as such stocks would be exceptionally liquid, which should protect their NBBO from material deterioration).

⁹⁵ *See* Letter from Derrick Chan, Head of Equities, Fidelity Capital Markets, dated Mar. 31, 2023 (“Fidelity Letter”) at 17. The commenter described “market data costs” as those related to systems changes necessary to implement the new minimum pricing increments, round lot definition, and odd-lot information definition.

⁹⁶ *See infra* section III.C.

⁹⁷ *See infra* section III.C.7.a; section III.C.8; section VII.D.1.d and section VII.F.1.c.

⁹⁸ *See infra* section VII.A; section VII.D.1.c (responding to comments raising concerns about increased message traffic increasing costs and stating: “[t]he Commission recognizes the potential for these costs articulated by the commenters but, considering additional information provided by commenters, expects these effects to be mild—including the effect on CAT costs.”).

⁹⁹ *See infra* notes 1594–1595 and accompanying text.

¹⁰⁰ *See* Proposing Release, *supra* note 11, at 80334.

¹⁰¹ *See infra* section VII.D.5.

¹⁰² *See* Letter from Rich Steiner, Head of Global Market Structure, RBC Capital Markets, dated Mar. 31, 2023 (“RBC Letter”) at 2. *See also* Letter from Nathaniel N. Evarts, Managing Director, Head of Trading, Americas, and Kimberly Russell, Market

increments is based on round lots.¹⁰⁷ Therefore, odd-lot information will not have an impact on determining minimum pricing increments under Rule 612. Further, for the reasons discussed below, the interaction of the reduction in tick size and the MDI Rules' round lot definition will likely not have a material impact on the NBBO of affected stocks since only the most exceptionally liquid stocks would have prices over \$250 and a TWAQS equal to or less than \$0.015.¹⁰⁸ Therefore, it is not necessary to postpone amending the minimum pricing increments until data is analyzed using the MDI Rules' round lots.

In addition, the dissemination of odd-lot information in conjunction with the MDI Rules' round lot sizes will increase transparency about better priced orders and therefore should be implemented within a similar time frame.¹⁰⁹ Odd-lot information will be provided for all NMS stocks, not just those NMS stocks that may be assigned a smaller round lot. As discussed below, the number of NMS stocks that may be assigned a smaller round lot as of November 30, 2023 is 163 NMS stocks.¹¹⁰ Therefore, while the MDI Rules' round lot sizes will provide transparency about some better priced orders in higher priced stocks, they will not enhance transparency about those orders that continue to be defined as odd-lots and will not increase transparency for NMS stocks priced at \$250 or less. This transparency is important for investors as it will enhance their ability to assess the current pricing in the market for certain NMS stocks. Therefore, the odd-lot information definition and the round lot definition each represents important, but different information that will enhance the usefulness of quotation information.

Some commenters recommended implementing the round lot definition but not the odd-lot information definition,¹¹¹ stating that implementing

odd-lot information would be burdensome on the industry,¹¹² or would delay the implementation of the round lot definition by increasing the development work needed to be performed by the industry,¹¹³ or that implementation of the odd-lot information definition "could lead investors to expect prices that are not available."¹¹⁴ For the reasons discussed above, the implementation of both of these definitions is important to enhancing transparency for investors. The Commission has provided more time for implementing these data elements to accommodate the systems changes that will be necessary, therefore lessening implementation and development burdens on the industry.¹¹⁵ Further, as discussed below, market participants may decide to provide information to their customers about the changes that are being implemented, such as how to understand the different prices, and how the changes may impact their order entry requirements. Investor notification and education can help investors understand the operation and impact of these data elements.¹¹⁶

II. Equity Market Structure Initiatives and the Regulation NMS Proposal

In December 2022, the Commission issued three other proposals related to separate aspects of equity market structure and Regulation NMS.¹¹⁷ A number of commenters provided comments on all four EMS Proposals jointly.¹¹⁸ One commenter stated that

LLC, dated Mar. 31, 2023 ("Hudson River Letter") at 2; Joanna Mallers, Secretary, FIA Principal Traders Group, dated Mar. 31, 2023 ("FIA PTG Letter II") at 4–5; BlackRock Letter at 12. *See also* *infra* section V.C.1.a. for a discussion of comments received on the accelerated implementation of the odd-lot information definition.

¹¹² *See* FIA PTG Letter II at 4–5; Hudson River Letter at 2.

¹¹³ *See* FIA PTG Letter II at 4–5.

¹¹⁴ Schwab Letter II at 36.

¹¹⁵ *See* *infra* section VI.C.

¹¹⁶ *See* *infra* section V.B.3.a.

¹¹⁷ *See* Securities Exchange Act Release Nos. 96943 (Dec. 14, 2022), 88 FR 3786 (Jan. 20, 2023) (proposal to amend rule 605 of Regulation NMS) ("Rule 605 Proposal"); 96945 (Dec. 14, 2022), 88 FR 128 (Jan. 3, 2023) (proposal to adopt a new rule under Regulation NMS that would enhance competition for the execution of marketable orders of individual investors) ("OCR Proposal"); and 96946 (Dec. 14, 2022), 88 FR 5440 (Jan. 27, 2023) (proposal to establish Commission rule-based best execution standards) ("Best Execution Proposal") (together, with the Proposing Release, the "EMS Proposals"). The Rule 605 Proposal was adopted on Mar. 6, 2024. *See* Rule 605 Amendments, *supra* note 10.

¹¹⁸ *See, e.g.*, Letters from Thom Tillis, Bill Hagerty, Mike Crapo, Cynthia Lummis, and Kevin Cramer, United States Senate, dated Jan. 20, 2023 ("Tillis et al. Letter"); Ellen Greene, Managing Director, Equity and Options Market Structure, Securities Industry and Financial Markets

Association, dated Feb. 8, 2023 ("SIFMA Letter I"); Joanna Mallers, Secretary, FIA Principal Traders Group, dated Feb. 15, 2023 ("FIA PTG Letter I"); Hope M. Jarkowski, General Counsel, NYSE Group, Inc., dated Mar. 13, 2023 ("NYSE Letter I"); John A. Zecca, Executive Vice President, Global Chief Legal, Risk & Regulatory Officer, Nasdaq, Inc., dated Mar. 30, 2023 ("Nasdaq Letter I"); Stephen John Berger, Managing Director, Global Head of Government & Regulatory Policy, Citadel Securities, dated Mar. 31, 2023 ("Citadel Letter I"); Adrian Griffiths, Head of Market Structure, MEMX LLC, dated Mar. 31, 2023 ("MEMX Letter"); Mehmet Kinak, Vice President and Global Head of Equity Trading, and Jonathan Siegel, Vice President and Managing Legal Counsel (Legislative & Regulatory Affairs), T. Rowe Price Associates, Inc., dated Mar. 31, 2023 ("T. Rowe Price Letter"); Bill Foster, French Hill, Henry Cuellar, Bill Huizenga, Wiley Nickel, Andy Barr, Ritchie Torres, Ann Wagner, Brittany Pettersen, Dan Meuser, Josh Gottheimer, Mike Flood, Vicente Gonzalez, Byron Donalds, Mike Quigley, Michael V. Lawler, David Scott, Andrew R. Garbarino, Gregory W. Meeks, Monica De La Cruz, Sean Casten, Scott Fitzgerald, Bradley S. Schneider, Erin Houchin, Jim Himes, Young Kim, Steven Horsford, Ralph Norman, Gwen Moore, Tom Emmer, Marc Veasey, and Zach Nunn, United States House of Representatives, dated Sept. 26, 2023 ("Foster et al. Letter"). *See also* Form Letter Type E, of which 14 comments were received, Form Letter Type F, of which 1,703 comments were received, and Form Letter Type G, of which 652 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>.

¹¹⁹ *See* Letter from John Ramsay, Chief Market Policy Officer, Investors Exchange LLC, dated Oct. 13, 2023 ("IEX Letter III") at 3–5 (explaining how adoption of the amendments to rule 605 should not delay adoption of the access fee cap and minimum increment amendments, and stating, "the premise that Rule 605 updates must be a precondition to any other changes looks more like a calculated stall than an argument for careful, reasoned decision making").

¹²⁰ *See, e.g.*, T. Rowe Price Letter at 3; BlackRock Letter at 17; FIA PTG Letter II at 2; Dimensional Letter at 1, 3; State Street Letter at 1–2; Letters from Jameson Schriber, Managing Director, Goldman Sachs & Co. LLC, dated Mar. 31, 2023 ("Goldman Sachs Letter") at 8–9; Kirsten Wegner, Chief Executive Officer, Modern Markets Initiative, dated Mar. 24, 2023 ("MMI Letter") at 2; William Capuzzi, Chief Executive Officer, Apex Fintech Solutions, Inc., dated Mar. 31, 2023 ("Apex Letter") at 14, 19; Michael Markunas, Deputy General Counsel, Chief Compliance Officer, B. Riley Securities, Inc., dated Mar. 31, 2023 ("B. Riley Letter") at 1; Kristen Malinconico, Director, Center for Capital Markets Competitiveness, U.S. Chamber of Commerce, dated Mar. 31, 2023 ("Chamber of Commerce Letter") at 2; Ellen Greene, Managing Director, Equity and Options Market Structure, Securities Industry and Financial Markets Association, dated Mar. 31, 2023 ("SIFMA Letter II") at 2, 22–23; William C. Thum, Managing Director and Assistant General Counsel, Securities Industry and Financial Markets Association Asset Management Group, dated Mar. 31, 2023 ("SIFMA AMG Letter I") at 2; Peter D. Stutsman, Global Head of Equity Trading, and Timothy J. Stark, Head of Equity Markets and Transaction Research, The Capital Group

¹⁰⁷ *See* *infra* section III.C.7.b.

¹⁰⁸ *See* *infra* section V.B.3.b.i (identifying only two stocks—both highly liquid—that would have qualified for both a tick reduction and a reduction in the round lot as of Nov. 30, 2023).

¹⁰⁹ *See* *infra* section VII.D.4.

¹¹⁰ *Id.*

¹¹¹ *See, e.g.*, Letters from Michael Blaugrund, Chief Operating Officer, NYSE, Jason Clague, Managing Director, Head of Operations, Charles Schwab & Co., and Joseph Mecane, Head of Execution Services, Citadel Securities, dated Mar. 6, 2023 ("NYSE, Schwab, and Citadel Letter") at 2; Jason Clague, Managing Director, Head of Operations, Charles Schwab & Co., Inc., dated Mar. 31, 2023 ("Schwab Letter II") at 6, 36; Ryan Kwiatkowski, Chairman of the Board, and James Toes, President & Chief Executive Officer, Security Traders Association, dated Apr. 3, 2023 ("STA Letter") at 8; Adam Nunes, Hudson River Trading

commenters suggested implementing only some of the proposed equity market structure changes, such as the Rule 605 Amendments or portions of the Regulation NMS Proposal.¹²¹ Some commenters stated that the Rule 605 Proposal should be implemented first and that data from the changes implemented in the Rule 605 Proposal should be analyzed to assess whether the changes proposed in the Regulation NMS Proposal should be made.¹²² Some

Companies, Inc., dated Mar. 31, 2023 (“Capital Group Letter”) at 2, 5; Ann Wagner, United States House of Representatives, dated Nov. 28, 2022 (“Wagner Letter”) at 2.

¹²¹ See, e.g., Letters from Stephen John Berger, Managing Director, Global Head of Government & Regulatory Policy, Citadel Securities, dated Mar. 31, 2023 (“Equity Market Structure Citadel Letter”) at 21; Ellen Greene, Managing Director, Equities & Options Market Structure, and Joseph Corcoran, Managing Director, Associate General Counsel, Securities Industry and Financial Markets Association, dated Aug. 24, 2023 (“SIFMA Letter III”) at 3; Steven M. Greenbaum, Senior Vice President, General Counsel, TradeStation Securities, Inc., dated Mar. 30, 2023 (“TradeStation Letter”) at 7; Gregory Davis, Managing Director and Chief Investment Officer, and Matthew Benchener, Managing Director, Personal Investor, The Vanguard Group, Inc., dated Mar. 31, 2023 (“Vanguard Letter”) at 2; Michael Camacho, Chief Executive Officer, Wealth Management Solutions, George C.W. Gatch, Chief Executive Officer, J.P. Morgan Asset Management, and Jason E. Sippel, Chief Executive Officer, J.P. Morgan Securities LLC, JPMorgan Chase & Co., dated Mar. 31, 2023 (“JPMorgan Letter”) at 2; Jiří Král, Deputy Chief Executive Officer, Global Head of Government Affairs, Alternative Investment Management Association, dated Mar. 31, 2023 (“AIMA Letter”) at 3; John L. Thornton, Co-Chair, Hal S. Scott, President, and R. Glenn Hubbard, Co-Chair, Committee on Capital Market Regulation, dated Mar. 31, 2023 (“CCMR Letter”) at 46; Douglas A. Cifu, Chief Executive Officer, Virtu Financial, Inc., dated Mar. 30, 2023 (“Virtu Letter II”) at 4; Andrew M. Saperstein, Co-President, Morgan Stanley, dated Mar. 31, 2023 (“Morgan Stanley Letter”) at 2–3, 6 and 7; Steve Quirk, Chief Brokerage Officer, Robinhood Markets, dated Mar. 31, 2023 (“Robinhood Letter”) at 46; MFA Letter at 14; FIA PTG Letter II at 2, 4, 7; NYSE Letter I at 10–11; SIFMA Letter II at 11, 23; State Street Letter at 3; Chamber of Commerce Letter at 1; STA Letter at 10–11; T. Rowe Price Letter at 3; Verret Letter I at 1, 5, 11; MMI Letter at 2–3; BlackRock Letter at 17; Capital Group Letter at 5; UBS Letter at 1–2; Foster et al. Letter at 1, 2; Fidelity Letter at 2, 5.

¹²² See, e.g., Letters from David Howson, Executive Vice President, Global President, Cboe Global Markets, Nathaniel N. Evarts, Managing Director, Head of Trading, Americas, State Street Global Advisors, Kimberly Russell, Market Structure Specialist, Global SPDR Business, State Street Global Advisors, Mehmet Kinak, Global Head of Equity Trading, T. Rowe Price, Todd Lopez, Americas Head of Execution Services, UBS Securities LLC, and Douglas A. Cifu, Chief Executive Officer, Virtu Financial Inc., dated Mar. 24, 2023 (“Cboe, State Street, et al. Letter”) at 1–2, 3; Michelle Bryan Oroschakoff, Managing Director, Chief Legal Officer, LPL Financial LLC, dated Mar. 31, 2023 (“LPL Financial Letter”) at 4; Schwab Letter II at 6, 37; UBS Letter at 1–2; Apex Letter at 14–15; MFA Letter at 6; SIFMA Letter II at 11, 22; SIFMA AMG Letter I at 2; T. Rowe Price Letter at 3; Vanguard Letter at 2, 7; JPMorgan Letter at 2; AIMA Letter at 3; CCMR Letter at 46; UBS Letter at 1–2, 10; Virtu Letter II at 4; Foster et al.

commenters stated that, in light of the Commission’s approval of the amendments to rule 605, the Commission should defer or suspend action on the Regulation NMS Proposal (and the two remaining EMS Proposals) and re-evaluate whether to proceed after the amendments to rule 605 have been implemented and the data collected following implementation has been analyzed.¹²³ One commenter suggested implementing the round lot and odd-lot information definitions after implementation of the Rule 605 Proposal, and thereafter pausing to assess the impact of the changes on the markets.¹²⁴

The Commission disagrees with comments urging delayed implementation of the Regulation NMS Proposal, either in its entirety or portions of it, as delaying these amendments will delay significant benefits for investors.¹²⁵ The amendments adopted in this release revise several provisions of Regulation NMS to benefit investors. The Commission is adopting amendments to Rule 612 that will benefit investors and other market participants by allowing certain NMS stocks to be priced in increments that are smaller than the preexisting rule allowed, which will

Letter at 1, 2; Capital Group Letter at 5; Morgan Stanley Letter at 2, 6–7; Fidelity Letter at 2, 5, 27; Letter from Ann Wagner, Andrew R. Garbarino, Frank D. Lucas, Bill Huizenga, Tom Emmer, Dan Meuser, Zach Nunn, Pete Sessions, French Hill, Bryan Steil, Michael V. Lawler, Erin Houchin, United States House of Representatives, dated June 27, 2024 (“Wagner et al. Letter”). Some commenters suggested adopting only the Rule 605 Amendments and portions of the Regulation NMS Proposal and then evaluating the impact of those changes on the market. See Letter from Melanie Ringold, Head of Legal, Americas, and Will Geyer, Global Head of Capital Markets, Invesco Ltd., dated Mar. 31, 2023 (“Invesco Letter”) at 2, 5; Hudson River Letter at 1–2; TradeStation Letter at 7.

¹²³ See, e.g., Letters from Barbara Comstock, Executive Director, American Consumer & Investor Institute, dated May 20, 2024 (“ACII Letter II”) at 1 and 3; Ellen Greene, Managing Director, Equities & Options Market Structure, SIFMA, and Joseph Corcoran, Managing Director, Associate General Counsel, SIFMA, dated 14, 2024 (“SIFMA Letter IV”); Ellen Greene, Managing Director, Equities & Options Market Structure, SIFMA, Joseph Corcoran, Managing Director and Associate General Counsel, SIFMA, William C. Thum, Managing Director and Associate General Counsel, dated Aug. 13, 2024 (“SIFMA AMG Letter II”) at 1–2; Thomas H. Merritt, Deputy General Counsel, Virtu Financial, Inc., dated June 21, 2024 (“Virtu Letter III”). See also Letters from Dan Meuser, Ann Wagner, Frank Lucas, Pete Sessions, Bill Huizenga, French Hill, Andrew Garbarino, Young Kim, Byron Donalds, Michael V. Lawler, Zach Nunn, United States House of Representatives, dated June 27, 2024 (“Meuser et al. Letter”) at 2; Michael V. Lawler, United States House of Representatives, dated July 9, 2024 (“Lawler Letter”) at 1; Wagner et al. Letter at 1–2.

¹²⁴ See State Street Letter at 3.

¹²⁵ See *supra* notes 121–124 and accompanying text. See also *supra* note 104.

lower transaction costs and introduce greater competition on price into the market. The adopted amendments to Rule 610 will lower costs for investors and other market participants by reducing the access fee caps and will help to address distortions in the market associated with the preexisting fee caps. Additionally, the amendments will require all exchange fees charged and rebates paid for the execution of an order to be determinable at the time of execution, allowing investors and other market participants the ability to know with certainty the costs of their transactions at the time of the trade and to allow investors to more readily request details about the fees and rebates applicable to their orders. Accelerating the implementation of the MDI Rules’ round lot and odd-lot information definitions will provide investors and other market participants that use SIP data with transparency about better priced quotes and orders that are available in the market but only visible to subscribers of exchange proprietary data feeds sooner than originally planned. The amendments provide important investor benefits, which are discussed throughout. Therefore, the Commission is not delaying adopting the amendments.

With respect to the Rule 605 Amendments, the Commission does not agree with commenters that stated that amended rule 605 data must be analyzed before adoption of the changes in this release.¹²⁶ The amendments adopted in this release are not dependent on rule 605 data nor is the data from rule 605 reports necessary before the Commission makes changes to better protect investors and benefit the markets more broadly.¹²⁷ While the Rule 605 Amendments will bring improvements to disclosures for order executions of NMS stocks,¹²⁸ the Regulation NMS amendments address other structural concerns relating to investors’ trading and the lack of transparency in the national market system. For example, quoted spreads for NMS stocks could not get tighter than \$0.01 under preexisting Rule 612 for all quotes and orders in NMS stocks that were priced equal to, or greater than, \$1.00 per share.

The Commission disagrees with the commenter that stated that the Commission should implement the

¹²⁶ See *supra* note 122.

¹²⁷ Although the amendments adopted in this release are not dependent on the implementation of the Rule 605 Amendments, the amendments adopted in this release will enhance the usability of information in the recently amended rule 605 reports. See *infra* section VII.D.6.a.ii.

¹²⁸ See Rule 605 Amendments, *supra* note 10.

round lot and odd-lot information definitions after the implementation of the Rule 605 Amendments and then wait to assess the effects of these changes.¹²⁹ The commenter stated that it supported the round lot and odd-lot information definitions but stated, without providing details or any other support, that “these changes could have unintended impacts on price discovery, routing complexity, and trading costs.”¹³⁰ The Commission adopted the definitions in 2020 to provide transparency about better priced orders that are available in the market but are not fully transparent in NMS information. These definitions will result in the provision to market participants of important information about the prices at which market participants are willing to trade and therefore will enhance price discovery. Market participants may have to assess their order routing decisions based on this enhanced transparency of better priced orders that are available in the market.¹³¹

As discussed below, the data analysis performed by the Commission and other market participants to assess changes in minimum pricing increments and the access fee caps were not derived from rule 605 reports.¹³² While one commenter stated that rule 605 data should be used to assess the amendments adopted in this release, the Commission has utilized relevant and sufficient data other than rule 605 data that fully and robustly support the amendments.¹³³ One commenter states that if this proposal were to be finalized along with the amendments to Rule 605, “it appears that market participants and regulators would be unable to accurately assess the true impact of the market structure changes contained in this Proposal, precluding an ‘apples-to-apples’ before-and-after comparison.”¹³⁴ However, market participants have other data with which

to analyze the effects of these amendments.

Some commenters stated that the EMS Proposals would have an impact on each other.¹³⁵ Some commenters stated that the EMS Proposals should have been analyzed together to assess how the proposals would relate to, and operate with, each other.¹³⁶ One group

¹³⁵ See, e.g., NYSE, Schwab, and Citadel Letter at 2; STA Letter at 4, 10–11; T. Rowe Price Letter at 3; RBC Letter at 2 and 5; Nasdaq Letter I at 1, 6; Dimensional Letter at 1–2; FIA PTG Letter II at 2; Schwab Letter II at 3, 37; Apex Letter at 14–15, 19; JPMorgan Letter at 2–3; Chamber of Commerce Letter at 2; BlackRock Letter at 3, 17; MMI Letter at 2–3, 9; B. Riley Letter at 2; Capital Group Letter at 5; Letters from Ari Rubenstein, CEO, GTS Securities LLC, dated Mar. 31, 2023 (“GTS Letter”) at 4, 9; Jatin Suryawanshi, Managing Director, Head of Global Quantitative Strategies, and Anna Ziotis Kurzrok, Managing Director, Head of Market Structure, Jefferies, LLC, dated May 2, 2023 (“Jefferies Letter”) at 1. See also Letters from Patrick McHenry, French Hill, Frank Lucas, Pete Sessions, Bill Posey, Blaine Luetkemeyer, Bill Huizenga, Ann Wagner, Andy Barr, Roger Williams, Tom Emmer, Barry Loudermilk, Alexander X. Mooney, Warren Davidson, John Rose, Bryan Steil, William Timmons, Ralph Norman, Dan Meuser, Scott Fitzgerald, Andrew R. Garbarino, Young Kim, Byron Donalds, Mike Flood, Michael V. Lawler, Zach Nunn, Monica De La Cruz, Erin Houchin, and Andy Ogles, United States House of Representatives, dated Sept. 26, 2023 (“McHenry et al. Letter”) at 2; Ronald C. Parker, President and CEO, National Association of Securities Professionals, dated Feb. 28, 2023 (“NASP Letter”) at 4; State Street Letter at 2.

¹³⁶ See, e.g., SIFMA Letter I at 1; SIFMA Letter II at 3, 8–9, 11, 12–13; SIFMA AMG Letter I 4–5; GTS Letter at 4–5; Hudson River Letter at 1; UBS Letter at 2; NYSE, Schwab, and Citadel Letter at 1; Citadel Letter I at 2, 28–29; Schwab Letter II at 2–3, 37; Virtu Letter II at 5, 19–20, 31–35, 55–57; MMI Letter at 2; Nasdaq Letter I at 6–7; Invesco Letter at 2; Goldman Sachs Letter at 3; Robinhood Letter at 7, 22, 24, 42, 44; Apex Letter at 14, 15; McHenry et al. Letter at 1, 2; CCMR Letter at 46; Chamber of Commerce Letter at 3; Equity Market Structure Citadel Letter at 13–14; Letters from JJ Kinahan, President, Tastytrade, Inc., dated Mar. 30, 2023 (“Tastytrade Letter”) at 2; Jason Clague, Managing Director, Head of Operations, Charles Schwab & Co., dated Mar. 22, 2023 (“Schwab Letter I”) at 2; Eric J. Pan, President and CEO, and Susan Olson, General Counsel, Investment Company Institute, dated Aug. 17, 2023 (“ICI Letter II”) at 2–3, 7–9; Mary Lou H. Ivey, Chairman of the Boards and Independent Trustee, David J. Urban, Independent Trustee, and Theo H. Pitt, Jr., Independent Trustee, Independent Trustees of ETF Opportunities Trust and World Funds Trust, dated Mar. 31, 2023 (“Independent Trustees Letter”) at 1–2; Stephen John Berger, Managing Director, Global Head of Government & Regulatory Policy, Citadel Securities, dated Dec. 5, 2023 (“Citadel Letter II”) at 1, 10; Christopher A. Iacovella, President & Chief Executive Officer, American Securities Association, dated Mar. 31, 2023 (“ASA Letter”) at 2, 3; Seth A. Miller, President, Cambridge Investment Research, Inc. dated Mar. 31, 2023 (“Cambridge Letter”) at 3; Nicolas Morgan, Founder and President, Investor Choice Advocates Network, dated Mar. 31, 2023 (“ICAN Letter”) at 2; Rebekah Goshorn Jurata, General Counsel, American Investment Council, dated Aug. 8, 2023 (“AIC Letter”) at 2, 5, 10; James Angel, Associate Professor of Finance, Georgetown University, dated Mar. 31, 2023 (“Angel Letter”) at 2; see also Letter from Jonathan Kanter, Assistant Attorney General, Doha Mekki, Principal Deputy Assistant Attorney General, Maggie Goodlander,

of members of Congress recommended that no equity market structure rule “should be finalized or implemented” until the Commission “[c]onduct[s] a comprehensive cost-benefit analysis of the aggregate impact of [these rules] and seek[s] public comment on this analysis[.]” and the Commission proposes “a reasonable, workable, and staggered schedule for public comment on the adoption and implementation of the proposals, considering their overlapping nature, significant compliance and operational burdens, and if they may be insurmountable for smaller or emerging firms.”¹³⁷

As discussed below in the economic analysis, the Commission uses as a baseline the world as it exists at the time of adoption, including adopted rules but not proposed rules.¹³⁸ Each release, like this release and the Rule 605 Amendments (which were adopted prior to the amendments in this release), explains fully the rationale for the particular rulemaking and includes a robust economic analysis of the rules being adopted, including the possible economic effects that commenters raised with regard to specific interactions between the amendments and the Rule. In addition, comments on how the adoption of the amendments should affect the timing or sequence of the other EMS Proposals will be considered if and when those rules are adopted. The economic analysis considers potential economic effects arising from any overlap in compliance dates between these amendments and other recent amendments.¹³⁹ Similarly, the effects of the amended rules are measured against the existing regulatory baseline, which includes recently adopted rules.¹⁴⁰

Commenting on the Proposing Release together with the other EMS Proposals, some commenters requested that the Commission publicly release anonymized subsets of CAT data¹⁴¹

Deputy Assistant Attorney General, David Lawrence, Policy Director, Karina Lubell, Chief, Competition Policy & Advocacy Section, Ihan Kim, Attorney Advisor, Competition Policy & Advocacy Section, and Owen M. Kendler, Chief, Financial Services, Fintech & Banking Section, United States Department of Justice, dated Apr. 11, 2023 (“DOJ Letter”) at 6.

¹³⁷ See McHenry et al. Letter at 2.

¹³⁸ See *infra* section VII.C.

¹³⁹ See *infra* sections VII.C and VII.D.6.

¹⁴⁰ The OCR Proposal and the Best Execution Proposal Release mentioned by commenters remain at the proposal stage. To the extent that the Commission takes final action on either of those proposals, the baseline in each of those subsequent rulemakings will reflect the regulatory landscape that is current at that time. See *infra* section VII.C, note 1047.

¹⁴¹ The CAT database contains confidential market information. See, e.g., Securities Exchange

¹²⁹ See State Street Letter at 3.

¹³⁰ See State Street Letter at 3.

¹³¹ See Rule 605 Amendments, *supra* note 10, at 26482 (stating, “Rule 605’s price improvement statistics that are relative to the best available displayed price will not be required to be reported until six months after odd-lot order information needed to calculate the best available displayed price is made available pursuant to an effective national market system plan.”).

¹³² See *infra* section VII.D.6.a.iii (stating that the Commission did not rely on rule 605 data in its analyses in the Proposing Release and in this release).

¹³³ See *id.* The Commission also has considered the interaction of the compliance dates of the adopted amendments with the compliance date of the Rule 605 Amendments. See *infra* section VI; section VII.D.6.b.

¹³⁴ See Citadel Letter I at 29.

used in connection with the tables and figures in the EMS Proposals' economic analyses.¹⁴² In the Proposing Release, unlike certain of the other EMS Proposals, CAT data was not used in any tables and figures.¹⁴³ Rather, the Proposing Release used CAT data to determine the numbers of affected broker-dealers in the baseline and compliance cost discussion in the economic analysis, as well as to determine statistics in a reasonable alternative to the proposed amendment that would have imposed a minimum pricing increment for trades.¹⁴⁴ The CAT information used in this adopting release is narrower still. Specifically, the Commission uses CAT information, consisting of lists of firm names, including firm identifier numbers and account type information, only to determine the numbers of affected firms. The Commission is not releasing anonymized versions of the CAT information used in this release because releasing an anonymized list of firm names would provide no meaningful information beyond the total number of affected firms, which is the same information provided in this release. The Commission described in the Proposing Release and describes in this release the CAT data and methodology used in connection with its estimates.

III. Final Rule 612 of Regulation NMS—Minimum Pricing Increment

Rule 612 of Regulation NMS establishes minimum pricing

increments (also known as minimum price variations or tick sizes) for quotations and orders in NMS stocks. Specifically, preexisting Rule 612 stated that “[n]o national securities exchange, national securities association, alternative trading system, vendor, or broker or dealer shall display, rank, or accept from any person a bid or offer, an order, or an indication of interest in any NMS stock priced in an increment smaller than \$0.01 if that bid or offer, order, or indication of interest is priced equal to, or greater than, \$1.00 per share.”¹⁴⁵ Preexisting Rule 612(b) had similar language that applied to bids, offers, orders, and indications of interest in any NMS stock priced less than \$1.00 per share and specified that the minimum pricing increment could not be smaller than \$0.0001. Preexisting Rule 612 of Regulation NMS did not establish or include minimum pricing increments for transactions.¹⁴⁶

A. Issues Raised in the Existing Market Structure Related to Tick Sizes

The Proposing Release contains an extensive discussion of the development and the consideration by the Commission and market participants of Rule 612 since its adoption.¹⁴⁷ Since the adoption of Rule 612, there has been a marked increase in the trading volume of NMS stocks that would likely be priced with tighter spreads if their pricing was not constrained by the uniform \$0.01 minimum pricing increment required by preexisting Rule 612 for quotes and orders all NMS stocks priced equal to, or greater than, \$1.00 per share. Easing constraints on ticks for these NMS stocks will reduce transaction costs for market participants, including investors, and allow prices to be determined in a more competitive manner. In other words, the number and volume of NMS stocks that could benefit from the ability to quote in a minimum pricing increment that is smaller than \$0.01 (*i.e.*, sub-pennies) has grown.

In the Proposing Release, the Commission considered data to evaluate and determine which NMS stocks, by number and by volume, would benefit from a reduced minimum pricing

increment for quotes and orders that would allow for tighter spreads. While the Commission could not estimate the number of stocks that would have a TWAQS of \$0.008 or less due to the preexisting Rule 612 requirement that all orders priced equal to greater than \$1.00 per share have a \$0.01 minimum pricing increment, the Commission could estimate that 1,707 stocks, which represented approximately 64% of share volume and 37.9% of dollar volume in January through May 2022, had TWAQS that were less than \$0.016.¹⁴⁸ Additionally, 2,648 stocks, which represented approximately 17.9% of share volume and 22.3% of dollar volume in January through May 2022, traded with a spread that was greater than \$0.016 and less than or equal to \$0.04. More recently, the Commission analyzed NMS stocks in 2023 and identified 2,420 NMS stocks that had a TWAQS of \$0.015 or less; these NMS stocks represent about 74% of share volume and about 47% of dollar volume.¹⁴⁹

Prior to the Proposing Release, certain market participants conducted data analyses on the effects of Rule 612 and concluded that a \$0.01 minimum quoting increment may not be appropriate for all NMS stocks that are priced greater than or equal to \$1.00.¹⁵⁰ The Commission discussed these data analyses in the Proposing Release.¹⁵¹ One of these market participants, Cboe, submitted updated data analysis in two comment letters to the Proposing Release.¹⁵²

Act Release No. 67457 (Jul. 18, 2012), 77 FR 45722, 45782 (Aug. 1, 2012) (stating that maintaining the confidentiality of customer and other information reported to CAT “is essential” and that “[w]ithout adequate protections, market participants would risk the exposure of highly-confidential information about their trading strategies and positions”); see also Securities Exchange Act Release No. 84696 (Nov. 15, 2016), 81 FR 84696 (Nov. 23, 2016).

¹⁴² See, e.g., SIFMA Letter I at 1–2, 3–4; Letters from Thomas M. Merritt, Deputy General Counsel, Virtu Financial, Inc., dated Feb. 24, 2023 (“Virtu Letter I”) at 1, 2; SIFMA Letter II at 2–3, 11, 22; SIFMA AMG Letter I at 5; Schwab Letter II at 3–4; T. Rowe Price Letter at 3; Chamber of Commerce Letter at 2–3; Robinhood Letter at 8; Equity Market Structure Citadel Letter at 16–17; Cambridge Letter at 4; Jefferies Letter at 1; SIFMA AMG Letter II at 5–7; and SIFMA Letter IV at 6.

¹⁴³ See SIFMA Letter I at 7 (“Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders—The following tables/figures within the Proposal use CAT data: none.”). The Commission responds to specific comments on releasing the CAT data used in the tables and figures of the specific EMS Proposals in the relevant adopting release, where appropriate. See Rule 605 Amendments, *supra* note 10.

¹⁴⁴ See, e.g., Proposing Release, *supra* note 11, at 80316, 80340–41. A commenter identifies this limited use of CAT data in the Proposing Release but does not identify specific additional information the Commission should provide. See Equity Market Structure Citadel Letter at 16–17.

¹⁴⁵ See 17 CFR 242.612.

¹⁴⁶ As discussed in the Proposing Release, the Commission granted exemptions from Rule 612 to various national securities exchanges’ retail liquidity programs (“RLPs”) as a way to allow them to compete with over-the-counter (“OTC”) market maker sub-penny price improvement. See Proposing Release, *supra* note 11, at 80271. Under the RLPs, exchanges can accept and rank certain quotes and orders from certain participants in sub-penny increments as small as \$0.001.

¹⁴⁷ See Proposing Release, *supra* note 11, at 80272–80273.

¹⁴⁸ See Proposing Release, *supra* note 11, at 80280.

¹⁴⁹ See *infra* section VII.D.1.b, table 3.

¹⁵⁰ See, e.g., The Tick-Constrained Stock Problem by Phil Mackintosh (Jan. 20, 2022), available at <http://www.nasdaq.com/articles/the-tick-constrained-stock-problem> (“Nasdaq Paper”). See also Petition for Rulemaking to Amend Rule 612 of Regulation NMS to Adopt Intelligent Tick-Size Regime, dated Dec. 16, 2019, submitted by John A. Zecca, Executive Vice President, Chief Legal Officer & Chief Regulatory Officer, Nasdaq Inc. available at <https://www.sec.gov/rules/petitions/2019/petn4-756.pdf> (“Nasdaq Intelligent Tick Proposal”); The Impact of Tick-Constrained Securities on the U.S. Equity Market (available at http://www.nyse.com/publicdocs/Tick_Constrained_Stocks.pdf) (“NYSE White Paper”) (no date available); and Cboe Proposes Tick-Reduction Framework to Ensure Market Structure Benefits All Investors (available at <https://www.cboe.com/insights/posts/cboe-proposes-tick-reduction-framework-to-ensure-market-structure-benefits-all-investors/>) (“Cboe Proposal”).

¹⁵¹ See Proposing Release, *supra* note 11, at 80274–80278.

¹⁵² See Letters from Angelo Evangelou, Cboe Global Markets, Inc., dated Feb. 28, 2023 (“Cboe Letter I”); Patrick Sexton, EVP, General Counsel & Corporate Secretary, Cboe Global Markets, Inc., dated Mar. 31, 2023 (“Cboe Letter II”) at Appendix A. See also Letter from Hope M. Jarkowski, General Counsel, NYSE Group, Inc., dated Mar. 27, 2023

B. Proposal To Amend Rule 612

The Commission proposed variable minimum pricing increments for quotes and orders for NMS stocks priced at, or greater than, \$1.00 per share based on the TWAQS of a particular NMS stock. The Commission also proposed that the minimum pricing increment for executions be the same as, and correlate to, the minimum pricing increment for quoting on all trading venues (*i.e.*, on-exchange and OTC), subject to certain exceptions.

Specifically, the Commission proposed that the minimum pricing increments for quotations, orders and executions in NMS stocks that are priced equal to or greater than \$1.00 per share would be variable and no smaller than: (1) \$0.001 if the TWAQS¹⁵³ for the NMS stock during the Evaluation Period¹⁵⁴ was equal to, or less than, \$0.008; (2) \$0.002, if the TWAQS for the NMS stock during the Evaluation Period was greater than \$0.008 but less than, or equal to \$0.016; (3) \$0.005, if the TWAQS for the NMS stock during the Evaluation Period was greater than \$0.016 but less than, or equal to, \$0.04; and (4) \$0.01 if the TWAQS for the NMS stock during the Evaluation Period was greater than \$0.04.¹⁵⁵ Further, as proposed, NMS stocks' TWAQS would have been measured quarterly based on one month of trading data.¹⁵⁶ In other words, it was proposed that the assignment of minimum pricing increments for the quoting and trading of NMS stocks priced equal to or greater than \$1.00 per share be done on a quarterly basis.

The Commission stated that it preliminarily believed that the proposed Rule 612 amendments would promote: (1) fair and orderly markets and economically efficient executions, particularly for tick-constrained NMS stocks and retail order flow; and (2) fair

competition and equal regulation between OTC market makers, exchanges, and ATSs that compete for retail liquidity by requiring that NMS stocks trade with the same minimum pricing increment regardless of venue (*i.e.*, on or off-exchange).¹⁵⁷ The Commission also stated that proposed Rule 612 would promote price discovery and price competition, particularly for tick-constrained stocks and retail order flow, by permitting the uniform quoting and trading of NMS stocks across trading venues, in finer increments, based on objective criteria. The Commission preliminarily believed that the proposed Rule 612 amendments would result in the pricing of quotes and orders being more in alignment with the principles of supply and demand.

C. Final Rule—Minimum Pricing Increments for Orders Priced Equal to or Greater Than \$1.00 per Share

After considering comments, and analyzing additional data in response to those comments, the Commission is modifying and adopting the proposed amendments to Rule 612. As adopted, Rule 612(b)(2) provides that no national securities exchange, national securities association, ATS, vendor, or broker or dealer shall display, rank, or accept from any person a bid or offer, an order, or an indication of interest in any NMS stock in an increment smaller than required pursuant to either paragraph (i) or (ii) below if that bid or offer, order, or indication of interest is priced equal to or greater than \$1.00 per share:

- (i) \$0.01, if the Time Weighted Average Quoted Spread for the NMS stock during the Evaluation Period was greater than, \$0.015; or
- (ii) \$0.005, if the Time Weighted Average Quoted Spread for the NMS stock during the Evaluation Period was equal to or less than \$0.015.

Rule 612(b)(3) provides that no national securities exchange, national securities association, alternative trading system, vendor, or broker or dealer shall display, rank, or accept from any person a bid or offer, an order, or an indication of interest in any NMS stock priced in an increment smaller than \$0.0001 if that bid or offer, order, or indication of interest is priced less than \$1.00 per share.¹⁵⁸

Further, as amended, minimum pricing increments for quotes and orders will be assigned on a semiannual basis using 3-months of trading data to

calculate each NMS stock's TWAQS.¹⁵⁹ Therefore, as adopted, a minimum pricing increment of either \$0.01 or \$0.005 will be assigned to each NMS stock for quotes and orders that are priced equal to or greater than \$1.00 per share twice a year and will be operative for a six-month period.¹⁶⁰

The amendment differs from the proposal because rather than adding three proposed smaller minimum pricing increments for quotes and orders (\$0.005, \$0.002, \$0.001) to the current \$0.01 increment, only one additional minimum pricing increment (\$0.005) for NMS stocks that have a TWAQS of \$0.015 or less will be added. In addition, the amendment differs from the proposal as it (1) does not include a minimum pricing increment for trades, (2) modifies the Evaluation Period, and (3) provides for an implementation period.

1. General Comments and Discussion

The Commission received many comments on the proposal to amend Rule 612.¹⁶¹ Some commenters supported the need to amend Rule 612.¹⁶² Many individual commenters generally supported the proposed amendments;¹⁶³ while some individual

¹⁵⁹ See Rule 612(a)(1).

¹⁶⁰ Some commenters suggested that the Commission consider wider quoting increments. See, e.g., Nasdaq Letter I; ASA Letter at 4; MEMX Letter at 20; Cboe, State Street, et al. Letter at 2; BIO Letter at 3; Invesco Letter at 3; Robinhood Letter at 39; Themis Letter at 5; Dimensional Letter at 2; and Letter from Tim Gately, Managing Director, Head of Equities Sales, Americas, Citigroup Global Markets, Inc., dated Mar. 31, 2023 ("Citigroup Letter") at 5. The Commission is not adopting a wider quoting increment for NMS stocks or a subset of NMS stocks as part of these amendments. As discussed throughout this release, the Commission is amending Rule 612 to address issues that developed related to the constraint that results from the \$0.01 minimum pricing increment. A wider quoting increment would not address these specific issues.

¹⁶¹ See *supra* note 82.

¹⁶² See, e.g., Form Letter Type A, of which 22 comments were received; Form Letter Type D, of which 255 comments were received; Form Letter Type G, of which 652 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>; IEX Letter I at 6; Letters from David Mechner, Chief Executive Officer, Pragma, LLC, dated Mar. 23, 2023 ("Pragma Letter"); Citigroup Letter at 4; MMI Letter at 3; Cboe, State Street, et al. Letter at 2; Nasdaq Letter I at 2; Managed Funds Letter dated March 30, 2023 at 11; letter from Joseph Scafidi, Global Head of Trading, and Carlos Oliveira, Head of Trading Analytics and Market Structure, Brandes Investment Partners, L.P., dated Mar. 23, 2023 (endorsed by Adam Conn, Director, Baillie Gifford (Overseas) Ltd. et al.) ("Brandes Letter") at 1; Angel Letter at 5; TradeStation Letter; Vanguard Letter at 4; B. Riley Letter at 1; JPMorgan Letter at 4; and UBS Letter at 10.

¹⁶³ See, e.g., Form Letter Type D, of which 255 comments were received; Form Letter Type E, of which 14 comments were received; and Form Letter Type G, of which 652 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>; Letter from Bibambop RIP, dated

("NYSE Letter II") (submitting for the record its paper entitled *Price Improvement, tick harmonization & investor benefit* (Aug. 22, 2022). This paper was described in the Proposing Release, *supra* note 11, at 80275; MEMX Letter, Appendix (submitting *Tick-constrained Securities* (Aug. 2021). This paper was described in the Proposing Release, *supra* note 11, at 80274. In the MEMX Letter, MEMX also submitted *Tick-constrained Securities, The Tick Size Debate, Revisited* (Jan. 2022) which analyzed a set of reverse splits on certain low-priced ProShares exchange-traded products ("ETPs") and finding that the tick-constrained ETPs analyzed traded with significantly lower spreads post reverse split. This paper was described in the Proposing Release, *supra* note 11, at 80318.

¹⁵³ See *infra* section III.C.7.b. See also proposed Rule 612(a).

¹⁵⁴ See *infra* section III.C.7.a. See also proposed Rule 612(a).

¹⁵⁵ See proposed Rule 612(c).

¹⁵⁶ See proposed Rule 612(a).

¹⁵⁷ See Proposing Release, *supra* note 11, at 80273 (discussing the competitive dynamic among exchanges, ATSs and OTC market makers).

¹⁵⁸ Rule 612(b)(3) is the same as preexisting Rule 612(b).

commenters agreed that Rule 612 should be amended but recommended that the proposal be modified.¹⁶⁴

Broadly, many commenters stated that preexisting Rule 612 should be amended in order to permit sub-penny quoting.¹⁶⁵ One commenter stated that for those stocks that are tick-constrained “[t]he one-cent increment for quoting can make it difficult for liquidity providers to fill orders and often results in higher trading costs.”¹⁶⁶ Another commenter stated that tick-constrained stocks experience wider quoted spreads, which results in “significantly increased transaction costs for investors,” and that these securities generally have longer queues and trade with “outsized notional liquidity at the NBBO.”¹⁶⁷ Several commenters stated that the “one-size-fits-all” requirement in Rule 612 should be revisited.¹⁶⁸ One commenter stated that Rule 612 impedes the ability of market participants to price some NMS stocks that would naturally be priced within the penny spread.¹⁶⁹ The adopted minimum quoting increment of \$0.005 will enable the targeted NMS stocks to be more naturally priced based on the principles of supply and demand within the penny spread.

Generally, comments from individuals supported the proposal without any additional suggested changes.¹⁷⁰ One commenter stated of

the proposal, “[t]his means that the pricing of stocks will be more precise and accurate, ensuring that I can get the best possible price for my trades.”¹⁷¹ Another commenter stated that “[a]llowing for sub-penny pricing will enable buyers to obtain lower prices from willing sellers and sellers to obtain higher prices from willing buyers, resulting in a more efficient market.”¹⁷² Comments from other market participants, including exchanges,¹⁷³ broker-dealers, and institutional investors¹⁷⁴ recommended modifying the proposal to Rule 612 to reduce the number of potential minimum quoting increments. Some commenters stated that further reduction of the minimum pricing increment for quotes and orders may be warranted for certain NMS stocks “in the future” but that a \$0.005 increment should be implemented and studied before any further reductions.¹⁷⁵ For the reasons discussed throughout, in response to commenters, the

comments were received; Form Letter Type J, of which 15 comments were received; and Form Letter Type K, of which 22 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>.

¹⁷¹ Letter from John dated Feb. 23, 2023.

¹⁷² Letter from Nevin Varghese dated Dec. 26, 2022.

¹⁷³ See IEX Letter I at 6; Choe, State Street, et al. Letter at 2; Nasdaq Letter I at 14; MEMX Letter at 18; and Choe Letter II at 3.

¹⁷⁴ See Capital Group Letter at 4; ICI Letter I at 5–6; Vanguard Letter at 4–5; Invesco Letter at 3; Schwab Letter II at 6; T. Rowe Price Letter at 4; Fidelity Letter at 14; Brandes Investment Letter dated March 31, 2023 at 2; Ontario Teachers, Alberta Investment, CalSTRS, CalPERS, Canada Pension, and Texas Retirement Letter dated Mar. 31, 2023 at 2 (“Ontario Teachers et al. Letter”); BlackRock Letter at 5; Dimensional Letter at 2; B. Riley Letter at 1; and Letter from Christopher P. Bowker Jr., Director of Global Equity Trading, Boston Partners Global Investors, Inc., Joe Mariano, Senior Vice President, Global Head of Trading, Calamos Advisors LLC, Melissa F. Hinmon, Director of Equity Trading, Glenmede Investment Management, Dan Royal, Global Head of Equity Trading, Janus Henderson Investors US LLC, dated Apr. 6, 2023 (“Boston Partners, Calamos Advisors, Glenmede Investment, and Janus Henderson Letter”); State Street Letter at 3; NYSE, Schwab, and Citadel Letter at 2; Letter from John Zhu, Head of Trading, Optiver US LLC, dated Mar. 15, 2023 (“Optiver Letter”) at 4; Pragma Letter at 1; Choe, State Street, et al. Letter at 2; Letter from Milan Galik, Chief Executive Officer, Interactive Brokers Group, Interactive Brokers LLC, dated Mar. 30, 2023 (“Interactive Brokers Letter”) at 5; RBC Letter at 3; Morgan Stanley Letter at 3–4; JPMorgan Letter at 4–5; Letter from at 2; Joe Wald, Managing Director & Co-Head of Electronic Trading, Eric Stockland, Managing Director, Global Markets, Brad A. Rothbaum, Managing Director & Head U.S. Global Markets, Chief Operating Officer & Head of the U.S. Branches, and Michael Forlenza, Managing Director & Head of U.S. Capital Markets Compliance, BMO Capital Markets Corp., dated Mar. 31, 2023 (“BMO Letter”); Brandes Investment Letter dated March 23, 2023 at 2; B. Riley Letter at 1; Themis Letter; UBS Letter at 10; Citigroup Global Letter at 4–5; and Jefferies Letter at 3.

¹⁷⁵ See, e.g., BlackRock Letter at 6 and B. Riley Letter at 1.

Commission is adopting amended Rule 612. Compared to the initial proposal, the modified amendments will be easier for market participants to implement and adapt to.

One commenter suggested that the Commission use its exemptive authority to reduce minimum pricing increments and access fees in a manner similar to that requested by MEMX.¹⁷⁶ MEMX requested an increment of \$0.005 for NMS stocks that are “tick-constrained” (defined by MEMX as stocks that trade with an average quoted spread of \$0.011 or less).¹⁷⁷ The commenter recommended this course of action as a means to gather data on sub-penny pricing increments to help determine whether, and to what degree, the proposed modifications were warranted.¹⁷⁸ The commenter also stated that using an exemption to test a reduction of minimum pricing increments and the access fee caps could include an expiration and a “roll-back” plan should unintended consequences become apparent.¹⁷⁹ Other commenters recommended that the Commission reduce the minimum pricing increments for a sample of stocks so that data could be gathered and evaluated before changes were adopted on a more widespread basis.¹⁸⁰ Finally, one commenter recommended that the Commission establish a “transparent structured process to evaluate whether proposed changes to minimum pricing increments and access fees are actually improving the execution experience” and that a “clearly articulated off-ramp/kill-switch to unwind these changes” be in place to return to current minimum pricing increments and the access fee caps.¹⁸¹ Another commenter stated that if the Commission adopted a modified amendment to Rule 612 that such modification should be re-proposed for public comment.¹⁸²

An exemption, other temporary course of action, such as a pilot or sample reduction, or a re-proposal of the

¹⁷⁶ See Jefferies Letter. See also Proposing Release, *supra* note 11, at 80277 for a discussion of the MEMX request for exemption.

¹⁷⁷ See Proposing Release, *supra* note 11, at 80277 for a discussion of the MEMX request for exemption.

¹⁷⁸ See Jefferies Letter at 2.

¹⁷⁹ *Id.* at 4.

¹⁸⁰ See, e.g., Choe, State Street, et al. Letter at 2; letter from Carlo Passeri, Vice President Biotechnology Innovation Organization (“BIO Letter”), dated Mar. 30, 2023; and State Street Letter at 3; MMI Letter at 3–7.

¹⁸¹ See Citigroup Letter at 6. With regard to the comment about an “off-ramp/kill-switch,” should the Commission observe trends detrimental to investors, the Commission could take appropriate action.

¹⁸² See Citadel Letter II at 3.

Mar. 16, 2023; Letter from Binh Tran, dated Mar. 4, 2023; Letter from Jerry Pang, dated Mar. 4, 2023; Letter from Charlie Chen, dated Mar. 1, 2023; Letter from Daniel Song, dated Jan. 12, 2023; Letter from Deok Park, dated Dec. 26, 2023; and Letter from Clarissa West, dated Apr. 1, 2023.

¹⁶⁴ See, e.g., Form Letter Type H, of which 853 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>.

¹⁶⁵ See, e.g., Letter from Stephen W. Hall, Legal Director and Securities Specialist, Better Markets, Inc., dated Oct. 31, 2023 (“Better Markets Letter II”) at 3; SIFMA Letter II; Brandes Letter at 1; ICI Letter I; BlackRock Letter; B. Riley Securities Letter; JPMorgan Letter at 4; Cambridge Letter at 6; Invesco Letter at 3; UBS Letter at 10; Citigroup Letter at 4; TradeStation Letter at 6; letters from individuals, including the Form Letter Type D, of which 255 comments were received; Form Letter Type G, of which 652 comments were received; and Form Letter Type H, of which 853 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>.

¹⁶⁶ See ASA Letter at 4.

¹⁶⁷ See MEMX Letter at 9.

¹⁶⁸ See, e.g., SIFMA Letter II at 33; BlackRock Letter at 5; Citigroup Letter at 4; and MMI Letter at 5; UBS Letter at 10; Letter from Lawrence Harris, Ph.D., CFA, Professor of Finance and Business Economics, U.S.C. Marshall School of Business, dated Dec. 18, 2023 (“Harris Letter”) at 8.

¹⁶⁹ See Better Markets Letter II at 8.

¹⁷⁰ See, e.g., Form Letter Type A, of which 22 comments were received; Form Letter Type D, of which 255 comments were received; Form Letter Type E, of which 14 comments were received; Form Letter Type G, of which 652 comments were received; Form Letter Type I, of which 22

adopted amendments is not warranted. The Commission and market participants already have provided data and analyses that support amending Rule 612 to address tick constraints.¹⁸³ As discussed throughout this release, the adopted amendments to Rule 612 will allow NMS stocks that are experiencing tick constraints with the \$0.01 minimum pricing increment to be priced more competitively (*i.e.*, reduce quoted spreads) and reduce transaction costs for liquidity demanders. The amendments to minimum pricing increments are designed to appropriately address significant concerns related to Rule 612.¹⁸⁴ One of the primary goals of the proposal and the adopted amendments is to alleviate tick constraints.

Reducing the minimum quoting increment for quotes and orders to \$0.005 for certain NMS stocks will enable such stocks to quote with tighter spreads, which in return reduces the transaction costs of investors.¹⁸⁵ As discussed below, the Commission has conducted analysis to show that quoted and effective spreads are likely to decline such that costs of executing small and medium trades will likely decline.¹⁸⁶ Further, Rule 612, as amended, while simplified compared to the proposal, continues to be designed to address constraint concerns with respect to those NMS stocks. Market participants and investors will be able to more easily adapt to the amended tick regime because they will only need to accommodate, and adjust for, one additional minimum pricing increment that is already familiar for a limited, readily discernable, group of NMS stocks.¹⁸⁷ The \$0.005 minimum pricing increment for quotes and orders, one of the three additional ticks proposed by the Commission, was widely supported by commenters.¹⁸⁸ Price improvement on exchanges and ATSS often occurs through midpoint executions in an increment of \$0.005. Accordingly, \$0.005 is an appropriate increment to introduce smaller, sub-penny minimum pricing increments in the national market system for quotes and orders priced equal to or greater than \$1.00.

Some individual commenters did not support the proposal.¹⁸⁹ One of those commenters stated that the minimum pricing increment for quotes and orders should be “based solely on that which can be spent in real life; no less than a single penny.”¹⁹⁰ Preexisting Rule 612 allowed quotes and orders in NMS stocks priced less than \$1.00 per share to be accepted, ranked and displayed in an increment as small as \$0.0001. Similarly, certain RLP Programs for national securities exchanges have been granted Commission exemptions to permit quotes and orders in NMS stocks priced equal to, or greater than, \$1.00 per share to be accepted, ranked and displayed in an increment as small as \$0.001. Sub-penny increments also existed in the market for many years, even prior to the adoption of Rule 612 in 2005.¹⁹¹ Sub-penny increments can allow market participants to better convey prices at which they are willing to trade, which can promote better price competition and lead to better price discovery. Further, as discussed above, sub-penny trading occurs frequently, whether at the midpoint or in other sub-penny increments.¹⁹² Thus, sub-penny increments are not a novel concept. As discussed above, \$0.005 is a common trading increment because of the use of midpoint orders under current Rule 612, and the ability to use such orders will not change under amended Rule 612. Nonetheless, the Commission understands that market participants may decide to provide investor notice and education about the availability of the new increment.¹⁹³

Another commenter stated that the proposed variable minimum pricing

increments were “not an effective solution to address concerns related to tick-constrained stocks” and suggested a uniform \$0.001 minimum pricing increment for all NMS stocks.¹⁹⁴ A uniform \$0.001 minimum pricing increment for all NMS stocks goes beyond what is necessary to address the issues related to NMS stocks that are currently constrained by the \$0.01 tick. A \$0.001 minimum pricing increment would be significantly smaller than the current uniform \$0.01 minimum pricing increment for quotes and orders for NMS stocks that are priced equal to, or greater than, \$1.00 per share. A sub-penny increment for NMS stocks that is too small would increase the incidence of stepping ahead (*i.e.*, pennyning)¹⁹⁵ and costs would not justify the benefits.

2. Specific Comments on the Proposed Minimum Pricing Increments

A few commenters did not support the implementation of the smallest proposed sub-penny increments (*i.e.*, \$0.002 and \$0.001), and referenced certain concerns, including stepping ahead of displayed orders, quote flickering that occurs when the price of a trading center’s best displayed quotations changes multiple times in a single second, and decreased depth.¹⁹⁶ Each of these were articulated as concerns by the Commission when Rule 612 was first adopted.¹⁹⁷

Some commenters stated that having ticks that are too small would result in queue jumping¹⁹⁸ and decreased depth.¹⁹⁹ In the Regulation NMS Adopting Release, the Commission discussed concerns related to stepping ahead of displayed quotations with orders priced in economically insignificant increments (*i.e.*, to gain

¹⁸⁹ See, e.g., letters from Joshua Russell dated Dec. 27, 2022; Matthew Gayvin Mutman dated Mar. 7, 2023; Aswin Joy dated Mar. 7, 2023.

¹⁹⁰ See Letter from Joshua Russell dated Dec. 27, 2022. *But see* letter from Anonymous dated Apr. 1, 2023 (stating “[g]etting more precise increment should be easy enough with our modern computers. At the gas station I get charged down to the .000th place, so why shouldn’t our markets work the same? Seems fair to me.”).

¹⁹¹ Prior to decimalization, quotes and orders were made in increments that were fractions of a dollar, including $\frac{1}{8}$, $\frac{1}{16}$ and $\frac{1}{32}$, which resulted in sub-penny pricing.

¹⁹² See *supra* section III.A.

¹⁹³ One commenter stated that to the extent the minimum quoting increment is reduced, FINRA would need to update the Manning Rule (FINRA rule 5320 which protects customer limit orders by requiring a minimum amount of price improvement for a firm to execute an order on a proprietary basis while holding an unexecuted customer limit order—the minimum amount of price improvement is currently \$0.01 for orders equal to or greater than \$1) in an equivalent manner. See Citadel Letter I at 8. The compliance date of the adopted rule provides sufficient time for FINRA to determine whether it would want to amend the Manning Rule in light of the amendments to Rule 612 and to file a proposed rule change pursuant to section 19(b) of the Exchange Act and rule 19b–4 thereunder.

¹⁹⁴ See Letter from Matthew Gayvin Mutman dated Mar. 7, 2023. The commenter suggested a uniform \$0.001 minimum pricing increment for all NMS stocks. Comments related to the level of minimum pricing increment are addressed in the next section.

¹⁹⁵ See *infra* note 994 defining pennyning. See also *infra* section VII.D.1 for additional discussion of this topic.

¹⁹⁶ See, e.g., Form Letter Type G Nasdaq Letter I; MFA Letter; Letter from Douglas Friedman, General Counsel, Tradeweb Markets Inc., dated Mar. 30, 2023 (“Tradeweb Markets Letter”); Virtu Letter II; State Street Letter; RBC Letter; Invesco Letter; ICI Letter I; Cboe Letter II; SIFMA Letter II; Vanguard Letter; JPMorgan Letter; Hudson River Letter; T. Rowe Price Letter at 4; Goldman Sachs Letter; Fidelity Letter; Citadel Letter I; Robinhood Letter; GTS Letter; BlackRock Letter; Citigroup Letter; Fidelity Letter at 11; Themis Letter at 3; and Tastytrade Letter at 20.

¹⁹⁷ See Regulation NMS Adopting Release, *supra* note 4, at 37551.

¹⁹⁸ See, e.g., MFA Letter at 11, State Street Letter at 3, and RBC Letter at 3.

¹⁹⁹ See, e.g., Nasdaq Letter I at 13; MFA Letter at 11, Virtu Letter II at 15, State Street Letter at 3, and RBC Letter at 3.

¹⁸³ See, e.g., MEMX Letter, Pragma Letter; IEX Letter I; and Nasdaq Letter I. See *infra* section VII.D.1.b.

¹⁸⁴ See *supra* section III.A.

¹⁸⁵ See *infra* section VII.D.1.b.ii.

¹⁸⁶ See *infra* section VII.D.1.b.ii.

¹⁸⁷ See *infra* section VII.D.1.a.

¹⁸⁸ See, e.g., MEMX Letter at 15–16. See also note 219 and accompanying text.

execution priority) which can deter the display of aggressively-priced limit orders that would narrow the spread.²⁰⁰ In light of these comments, amended Rule 612 has been simplified compared to what was proposed. Thus, the Commission is only adding the \$0.005 minimum pricing increment for quotes and orders for those NMS stocks that have a TWAQS of \$0.015 or less. Because the \$0.005 minimum pricing increment is based on the TWAQS of the NMS stock, the \$0.005 minimum pricing increment, relative to the spread, will be economically significant for these stocks.²⁰¹

Some commenters stated that smaller tick sizes would cause flickering quotations.²⁰² In the Regulation NMS Adopting Release, the Commission considered issues related to quote flickering.²⁰³ The Commission stated that quote flickering can result in broker-dealers having difficulties in satisfying their best execution obligations and other regulatory responsibilities.²⁰⁴ Because computer algorithms and ultra-fast connections dominate today's trading and quoting activities such concerns are not as acute or prevalent as they were at the time of the adoption of Rule 612.²⁰⁵ Today's quotations are calculated and displayed in microseconds, which is significantly faster than in 2005 and while flickering quotations can exist today, computer systems are much better able to process them such that they should not cause compliance difficulties or investor confusion.²⁰⁶ Accordingly, because of technological advancements, today's market structure, compared to 2005, can more readily handle rapid changes to a trading center's best bid or offer. Further, the concerns about the potential for flickering quotes should be mitigated to some extent because the amendments do not include the smaller proposed increments (*i.e.*, \$0.001 and \$0.002) and are designed to have fewer

ticks between the spread which will lessen the potential price changes between the spread.

Other commenters stated that the proposed minimum quoting increments of \$0.002 and \$0.001 were too small,²⁰⁷ would introduce too many intra-spread ticks,²⁰⁸ and could harm trading by substantially increasing fragmentation of liquidity.²⁰⁹ The Commission also considered the impact of sub-penny quoting on market depth,²¹⁰ *i.e.*, the number of shares available at the NBBO when it originally adopted quoting increments.²¹¹ Decreased depth could lead to increased transaction costs and fragmentation.²¹² Adopting only one additional minimum quoting increment instead of the proposed four-tier approach, should help address commenters' concerns with respect to fragmented liquidity²¹³ because there will be fewer price levels at which liquidity aggregates, which will result in less fragmentation. The modified amendment of Rule 612 does not include the proposed smaller minimum pricing increments for quotes and orders of \$0.001 and \$0.002, and thus commenters' concerns related to those increments (*e.g.*, decreased depth at the NBBO) are not applicable.²¹⁴ As discussed, the Commission has determined to take an incremental approach in amending Rule 612 by only adding a \$0.005 minimum pricing increment for those NMS stocks that are constrained by the preexisting, uniform minimum pricing increment based on an objective standard that is designed to have fewer ticks between the spread than the proposal.²¹⁵ As adopted, those NMS stocks that are assigned the \$0.005 minimum pricing increment will result in three ticks intra-spread, which falls in the middle of the 2 to 4 ticks intra-spread suggested as potentially optimal by many commenters.²¹⁶ Finally, the Commission addresses its primary concern of relieving the constraint

related to the \$0.01 increment for certain NMS stocks by only adding the \$0.005 minimum pricing increment and not adding minimum pricing increments of \$0.002 and \$0.001. The \$0.005 minimum pricing increment for constrained NMS stocks will allow these stocks to quote more naturally and efficiently, and thereby reduce transaction costs for investors without the concerns that would attach if the minimum pricing increments were smaller.

3. Comments on the Number of Proposed Increments

Some commenters supported reducing the minimum pricing increment for quotes and orders to address those NMS stocks that are tick-constrained, but overall did not support the proposal's four minimum quoting increments.²¹⁷ Many commenters stated that the proposed quoting increments were too numerous.²¹⁸ Instead, a number of commenters recommended that the Commission adopt a modified, simpler amendment to Rule 612 and suggested only adopting one additional minimum quoting increment of \$0.005 for tick-constrained NMS stocks.²¹⁹ One commenter said that "reducing the tick size to one-half cent for stocks with narrower spreads will address the current market need."²²⁰ Commenters opposed the proposed four minimum quoting increments based on complexity for market participants to program into their systems these increments,²²¹ potential increased costs for

²¹⁷ See, *e.g.*, SIFMA Letter II at 34; AIMA Letter at 2; STA Letter at 6–7; Citadel Letter I at 30; Citigroup Letter at 4; Dimensional Letter at 2; BlackRock Letter at 3; Public Pension Letters dated Mar. 31, 2023; MMI Letter at 3; Brandes Letter at 1; Schwab Letter II at 35–36; Invesco Letter at 3; B. Riley Letter at 1; JPMorgan Letter at 4; Cambridge Letter at 6; and Tastytrade Letter at 18.

²¹⁸ See, *e.g.*, MFA Letter at 12; Capital Group Letter at 3; ICI Letter I; Angel Letter at 6; Vanguard Letter at 5; and Meuser et al. Letter at 1.

²¹⁹ See *id.* See also Nasdaq Letter I; MFA Letter; MEMX Letter; Capital Group Letter; ICI Letter I; Citadel Letter I; Citigroup Letter at 4; BlackRock Letter; Apex Letter; Ontario Teachers et al. Letter at 2; Citigroup Letter; GTS Letter; ICI Letter I; Invesco Letter; Robinhood Letter; SIFMA Letter II; STA Letter; UBS Letter; Vanguard Letter; TradeStation Letter at 6; Choe Letter; IEX Letter; Nasdaq Letter I; and NYSE Letter I; Brandes Letter at 2; Invesco Letter at 2; Fidelity Letter at 14; Themis Letter at 6; B. Riley Letter at 1; JPMorgan Letter at 4; Morgan Stanley Letter at 4; State Street Letter at 3; Dimensional Letter at 2; BMO Capital Letter at 2; and Meuser et al. Letter at 1.

²²⁰ See ASA Letter at 5. See also TradeStation Letter at 6.

²²¹ See, *e.g.*, CTA/UTP Letter dated March 29, 2023; Nasdaq Letter I; State Street Global Letter; RBC Letter; ICI Letter I; Vanguard Letter; Choe Letter II; SIFMA Letter II; Fidelity Letter; Brandes Letter at 2; Robinhood Letter at 20; Morgan Stanley Letter at 4; and Meuser et al. Letter at 2.

²⁰⁰ See Regulation NMS Adopting Release, *supra* note 4, at 37551.

²⁰¹ See *infra* section VII.D.1.b.ii and notes 1300–1303 and accompanying text.

²⁰² See, *e.g.*, MFA Letter at 11, State Street Letter at 3, RBC Letter at 3, and Invesco Letter at 3.

²⁰³ See Regulation NMS Adopting Release, *supra* note 4, at 37551.

²⁰⁴ *Id.* at 37552.

²⁰⁵ See MDI Adopting Release, *supra* note 10, for a discussion about market data latencies. Flickering quotations is more of a concern when there is quote latency, in other words, when the displayed quotations do not reflect the actual quotations. For example, when the quote is being updated faster than the quote can be displayed, the price discovery mechanism may not be benefited.

²⁰⁶ See Regulation NMS Adopting Release, *supra* note 4, at 37553–37554 (discussing the concerns with flickering quotes when Rule 612 was adopted and acknowledging that the market could evolve).

²⁰⁷ See, *e.g.*, SIFMA Letter II at 33; Vanguard Letter at 5; Schwab Letter II at 35; Fidelity Letter at 11; JPMorgan Letter at 4; UBS Letter at 12; Citigroup Letter at 4; and Harris Letter at 7.

²⁰⁸ See, *e.g.*, Pragma Letter, Robinhood Letter at 40; IEX Letter I at 9; and Angel Letter at 6. The adopted \$0.005 minimum pricing increment will provide for at least three ticks intra-spread. See *infra* section VII.D.1.

²⁰⁹ See, *e.g.*, Interactive Brokers Letter at 4; Virtu Letter II at 4; and Themis Letter at 3.

²¹⁰ See *infra* section VII.D.1.b.

²¹¹ See Regulation NMS Adopting Release, *supra* note 4, at 37552.

²¹² See Regulation NMS Adopting Release, *supra* note 4, at 37552.

²¹³ See Citadel Letter I at 7. See also Virtu Letter II at 2 and 6–7.

²¹⁴ See *infra* section VII.D.1.b.i.

²¹⁵ See *infra* section III.C.6.

²¹⁶ See *infra* note 1299 and accompanying text.

investors,²²² and potential investor confusion with respect to minimum pricing increments that could change periodically as proposed.²²³ Another commenter stated that the four-tier proposal would favor “high-frequency traders who have a long history of leveraging complexity to their advantage and to the detriment of ordinary investors.”²²⁴ One commenter stated that the proposed variable minimum pricing increments “as small as \$0.001 goes well beyond what is necessary, and would also be cost prohibitive and complicated to implement.”²²⁵ One commenter questioned the impact of smaller increments on Rule 611 of Regulation NMS and recommended that if the Commission “proceed[ed] with their sub-penny quoting proposal. . . .”, it should consider amending Rule 611 to include all displayed depth of book quotes.²²⁶

After considering the comments and analyzing data,²²⁷ the Commission is amending Rule 612 to only add one new minimum pricing increment of \$0.005 for those NMS stocks that have a TWAQS of \$0.015 or less, rather than also adopting the additional two \$0.002 and \$0.001 pricing increments as proposed. The Commission’s basis for the new minimum pricing increment of \$0.005 is rooted by the current midpoint increment when the NBBO is at its narrowest (or smallest) spread. The midpoint increment of the current \$0.01 minimum quoting spread is calculated as (NBB plus NBO) divided by 2, and when the spread is at its narrowest, the midpoint increment is equal to \$0.005. For example, if the NBB is 10.01 and the NBO is 10.02, the midpoint would be 10.015 $((10.01 + 10.02)/2 = 10.015)$. Further, the new minimum quoting increment is at a price level familiar to all market participants and is already programmed into many computer systems. This modified approach

addresses the concerns raised by commenters related to the proposed \$0.002 and \$0.001 minimum pricing increments. The adopted amendments also address commenters’ concerns about complexity and potentially advantaging certain types of market participants by reducing the number of new increments and the universe of NMS stocks that may be eligible for a smaller minimum pricing increment. The adopted \$0.005 minimum pricing increment for those NMS stocks that have a TWAQS of \$0.015 will address the immediate concerns about the constraints that have developed in the national market system as a result of preexisting Rule 612.

4. Comments on Small- and Mid-Sized Stocks

A few commenters stated that the proposal to reduce minimum pricing increments did not consider the impact on small and mid-sized stocks.²²⁸ One commenter opposed the Regulation NMS Proposal because of concerns that it did not “address the needs and possible unintended consequences for small and mid-sized stocks” and that the Commission should “not take any action until such time as a pilot has been launched and its effects studied and verified by a committee of market participants and academics.”²²⁹ Another commenter stated that the proposed tick sizes were “too granular” for small to mid-sized stocks and would result in fewer liquidity providers.²³⁰

The assignment of the smaller minimum pricing increment is not based on market capitalization because the economics of being tick-constrained do not depend on market capitalization. Rather, whether a stock is experiencing constraint depends on its spread. In other words, since a stock’s spread relative to the tick size does not depend on whether it has a small or mid-sized market capitalization, such a stock could still trade with a quoted spread constrained by \$0.01 minimum pricing increment. With respect to implementing a pilot program to assess the needs and potential consequences of the proposal for small and mid-sized stocks, the Commission previously conducted a tick size pilot program for small- and mid-sized stocks to assess the impact of wider minimum quoting and trading increments.²³¹ The

Commission analyzed data from that pilot program for purposes of the amendments.²³² Another pilot program is not necessary because the Commission and market participants have demonstrated with data the issues related to tick constraints that have increased since the preexisting rule was adopted.²³³ Further, the modified amendment will not introduce increments that are “too granular” for any NMS stock; only those NMS stocks that have a TWAQS of \$0.015 or less will be assigned the new \$0.005 increment, or three ticks or fewer within the spread. These NMS stocks are constrained by the preexisting increment and the amendment will alleviate this regulatory constraint to allow competitive forces of supply and demand to better establish bid and ask prices.²³⁴

5. Comments on Market Resiliency

A few commenters raised concerns related to market resiliency risks.²³⁵ The commenter stated that “[b]ecause the Commission’s proposal would increase the number of ticks inside the weighted average spread for many stocks, we could expect a significant increase in message traffic that would result from the Commission’s proposal.”²³⁶ The commenter asked the Commission to consider the potential increased message traffic that could result from the proposed minimum pricing increments and stated that the proposal would result in a significant increase in message traffic.²³⁷ The commenter recommended the Commission take a measured and phased approach for reducing the minimum pricing increment for quoting to apply the minimum quoting increment initially to a limited number of stocks and additional groups of stocks in subsequent phases, with review of market resiliency during each phase.

The amendments modifying Rule 612 will result in less message traffic, fewer systems changes and lower costs related to updating ticks for NMS stocks compared to the original proposal and

available at https://www.sec.gov/dera/staff-papers/working-papers/dera_wp_tick-sizes-and-market-qualityrevisiting-tick-size-pilot.

²³² See *infra* section VII.D.1.

²³³ See *infra* section VII.D.1.b.ii.

²³⁴ See also *infra* section VII.D.1.b.i and VII.B.2 for additional discussion.

²³⁵ See, e.g., Letter from Howard Meyerson, Managing Director, Financial Information Forum, dated Mar. 31, 2023 (“FIF Letter”) at 6; and Goldman Sachs Letter at 8.

²³⁶ See FIF Letter at 7.

²³⁷ See FIF Letter at 7. See also Robinhood Letter at 41; Morgan Stanley Letter at 3; UBS Letter at 12; Citigroup Letter at 4; TradeStation Letter at 7; and Goldman Sachs Letter at 9.

²²² See, e.g., Dimensional Letter at 2.

²²³ See, e.g., Tastytrade Letter at 5, 18; SIFMA Letter II at 7; Morgan Stanley Letter at 3, 4; Fidelity Letter at 13; SIFMA Letter II at 34; Better Markets Letter I at 14; Robinhood Letter at 20; Citadel Letter I at 8; and STA Letter at 5.

²²⁴ See Better Markets Letter II at 4. See also Fidelity Letter at 12; Themis Letter at 6; Ontario Teacher et al. Letter at 2; and Harris Letter at 7.

²²⁵ See TradeStation Letter at 6.

²²⁶ See Themis Letter at 5. As discussed, the Commission is adopting a modified amendment to Rule 612 to introduce only a \$0.005 minimum pricing increment for certain NMS stocks, not the smaller proposed increments of \$0.002 and \$0.001. Therefore, the commenter’s recommendation is no longer germane because without the proposed smaller \$0.002 and \$0.001 increments, the liquidity would not be as dispersed throughout the depth of the book which would not necessitate protection of the full depth of the book.

²²⁷ See *infra* section VII.D.1.

²²⁸ See BIO Letter at 1–2, 3 and STA Letter at 5.

²²⁹ See BIO Letter at 1–2, 3.

²³⁰ See STA Letter at 5.

²³¹ See Proposing Release, *supra* note 11, at 80272–73 for a discussion of the tick size pilot program. See also Tick Sizes and Market Quality: Revisiting the Tick Size Pilot by Yashar H. Barardehi, Peter Dixon, Qiyu Liu, and Ariel Lohr,

therefore there should pose less of a concern related to market resiliency. The modified amendment adopts a single sub-penny increment that impacts a smaller universe of NMS stocks compared to the proposal, which included three sub-penny increments that would have impacted more NMS stocks. The need for a phased approach is significantly reduced because fewer NMS stocks will be impacted by the one additional minimum quoting increment, and there will be fewer ticks between the spread.

The commenter stated that the potential costs to industry members from increased message traffic would include purchasing additional computer hardware such as servers and that the costs would also apply to production, backup, test, and development environments.²³⁸ The commenter stated that the actual costs would be multiples of the estimated costs from the proposal. However, the adopted amendment to Rule 612 will result in less message traffic than the proposal because it has fewer quoting increments. Consequently, the modified amendments that are being adopted will reduce computer hardware and developmental costs for the industry compared to the proposal. In the Proposing Release, the Commission considered the message traffic of the options markets, and the systems for the options markets that handle many times more messages compared to (1) the current NMS stock market or (2) the estimated additional message traffic from the adopted amendments.²³⁹ One commenter submitted data that supported this conclusion.²⁴⁰

The commenter also raised concerns that increased quote message traffic could significantly increase the costs of the operation of the CAT system.²⁴¹ The

commenter recommended that the Commission estimate the potential increase in message traffic, provide those estimates to CAT LLC, obtain estimates from the CAT LLC of the increased CAT costs that would result from this increased message traffic, and factor the estimated costs into the cost benefit analysis of the proposed minimum pricing increments changes. Another commenter also stated that the Commission failed to consider whether the increase in message traffic will increase the CAT operating budget.²⁴² The Commission estimates the impact of the adopted amendments on message traffic, and thus on the CAT operating budget in section VII.D.1.c. As discussed further below, the Commission estimates the increase in CAT costs associated with adopting the additional minimum pricing increment to be approximately \$4.1 million per year.²⁴³ The Commission does not believe it is appropriate to delay action on Rule 612 to have CAT LLC engage in its own analysis of the potential costs.

Commenters raised the issue of increased market data volume on competing consolidators, which are not yet in operation.²⁴⁴ Likewise, the possible costs to potential competing consolidators will be reduced vis-à-vis the proposal. The Commission recognizes that while the costs may be lower than the proposed rule, the adopted rule could nevertheless create increased message traffic than the preexisting rule. It follows that more message traffic could lead to more possible costs for competing consolidators. However, this new message traffic should still be within the operational capacity of the existing computer systems.²⁴⁵

One commenter stated that even with the largest potential increases in messages, equity messaging traffic would remain well below that of the options market and that “the increase in messaging activity from adopting finer tick increments is now well within the industry’s capability.”²⁴⁶ On the other

hand, another commenter stated that a larger number of ticks across a large number of stocks would lead to increased message traffic, which would, in turn, increase data and infrastructure costs and market latency.²⁴⁷ One commenter added that increased message traffic would lead to increased latency, which would harm market participants by disrupting trading strategies and impairing market functionality and liquidity.²⁴⁸ As stated above, the adopted amendment to Rule 612 is significantly less complex than the proposal and will not result in the larger number of ticks across a large number of stocks as the commenter suggested. The proposal’s four minimum tick increment has been simplified to one additional new tick at \$0.005, and the proposal’s reduction of minimum pricing increments for NMS stocks that had a TWAQS of \$0.04 or less has been reduced to those NMS stocks that have a TWAQS equal to or less than \$0.015, which results in fewer expected NMS stocks being assigned a smaller minimum pricing increment.²⁴⁹ These adopted changes may result in significantly less message traffic than under the commenter’s assumption on the proposal. While message traffic may increase over today’s message traffic, any increase in message traffic will be significantly less than in the options market, and the options market participants have over the years adjusted to increasingly higher message traffic.²⁵⁰

6. Comments on Proposed Criteria for Assigning Minimum Pricing Increments

The Commission proposed to measure the TWAQS when determining the appropriate minimum pricing increment for NMS stocks and proposed four ranges of the TWAQS to determine the corresponding minimum pricing increments. The four proposed TWAQS ranges were: (1) equal to or less than

²³⁸ See FIF Letter at 9. See also Citigroup Letter at 2. See *infra* section VII.D.5.a.

²³⁹ See Proposing Release, *supra* note 11, at 80279, notes 196 and 197 (stating that in the second quarter of 2011, the average peak message per second for Tapes A and B reported by the CTA/CQ Plan was 1,015,000 and for Tape C reported by the UTP Plan was 408,300 versus 36.4 million reported by the Options Price Reporting Authority (“OPRA”). See also section VII.E.1.

²⁴⁰ See NYSE Letter I at 11–13.

²⁴¹ See FIF Letter at 10 (“FIF members are concerned that increased message traffic could significantly increase the costs for the operation of the CAT system as increased quote volumes (including increased frequency of quote updates) would increase the number of CAT-reportable events. 100% of these increased CAT costs would be charged to broker-dealers and exchanges. The operating expenses for CAT were \$84.5 million for 2020 and \$146.5 million for 2021. CAT LLC, the operator of the CAT system, has estimated the total expenditures for CAT for 2022 at \$178.9 million. These costs are in excess of the costs that were contemplated in the CAT NMS Plan.”).

²⁴² See Citadel Letter II at 5. The commenter added that increased message traffic increases costs for all market participants, including higher fees charged by CAT and the exclusive SIPs. See also Citadel Letter I at 9 and Virtu Letter II at 6–7.

²⁴³ See *infra* section VII.D.1.c.

²⁴⁴ See, e.g., Citadel Letter II at 9 (“A material increase in total message traffic increases costs for all market participants, including due to the resulting higher fees charged by industry utilities, such as the [CAT] and the [SIP]”) and Virtu Letter II at 6–7 (“The Commission has failed to analyze the impact of the significantly increased volume of market data on competing consolidators.”).

²⁴⁵ See *infra* section VII.D.1.

²⁴⁶ See NYSE Letter II at 11 (stating that OPRA handles many times more messages than the equity markets).

²⁴⁷ See MFA Letter at 11.

²⁴⁸ See Tradeweb Letter at 2–3 (“Even trading platforms with the most advanced technological infrastructure will need to expend considerable amounts of time and resources to prepare the accommodate increased message traffic, since any increase in latency (even at the millisecond level) would disrupt trading strategies, impair market functionality and liquidity, and, ultimately, harm market participants.”); see also Virtu Letter II at 6 (“This increase in message traffic. . . will significantly add to the overall content of market data.”). See also NYSE Letter I at 6 and Nasdaq Letter I at 9 (“Securities with too many ticks not only have wider spreads, but they also have more odd lots, and more message traffic, leading to a more fragile NBBO.”).

²⁴⁹ See *infra* section VII.D.1.a.

²⁵⁰ See Options Clearing Corporation Daily Volume report, available at <https://www.theocc.com/Market-Data/Market-Data-Reports/Volume-and-Open-Interest/Daily-Volume>.

\$0.008; (2) greater than \$0.008 but less than or equal to \$0.016; (3) greater than \$0.016 but less than or equal to \$0.04; and (4) greater than \$0.04. Preliminarily, the Commission believed that NMS stocks with a TWAQS of \$0.04 or less would have benefited from smaller minimum pricing increments. After considering the comments, the Commission is retaining TWAQS as the measure to determine when an NMS stock will be assigned smaller minimum pricing increment but has modified the threshold to be equal to or less than \$0.015.

Many commenters stated that tick-constrained stocks would benefit from smaller minimum pricing increments.²⁵¹ Commenters, however, raised concerns about reducing the minimum pricing increment for NMS stocks that were not experiencing tick constraint with the \$0.01 minimum pricing increment.²⁵² One commenter stated that “a reduction in tick sizes for those stocks that are merely near-tick-constrained will not result in meaningful price-improvements and will not be worth the increased risk of diminished liquidity to bids and offers being spread too thinly across too many price points.”²⁵³ As adopted, the new \$0.005 minimum pricing increment will be assigned to those NMS stocks that have a TWAQS of \$0.015 or less. These NMS stocks are experiencing constraint with the \$0.01 minimum pricing increment and will benefit from being able to be quoted in the smaller increment. As adopted, the Commission has modified the amendment so as not to assign the smaller \$0.005 increment to those NMS stocks that are not

necessarily experiencing constraint with the \$0.01 minimum pricing increment.

Some commenters stated that the TWAQS of \$0.011 should be used for identifying NMS stocks that are experiencing tick constraint.²⁵⁴ However, one commenter recommended that NMS stocks that “could easily become tick-constrained” should have their minimum pricing increment reduced.²⁵⁵ Other commenters offered other recommendations as to the TWAQS threshold for reducing minimum pricing increments, including a TWAQS threshold of \$0.02 or less,²⁵⁶ a TWAQS threshold of \$0.016 or less,²⁵⁷ and a TWAQS threshold of 0.015 or less.²⁵⁸

As discussed further below, the Commission is adopting the TWAQS threshold of \$0.015 or less in order to identify NMS stocks that will be eligible for the \$0.005 minimum pricing increment.²⁵⁹ This amendment will generally result in these NMS stocks having a bid-ask spread with one to three ticks, which will improve market quality.²⁶⁰ Data analysis supports that liquidity and market quality will improve if NMS stocks with a TWAQS of \$0.015 or less are assigned to the \$0.005 minimum pricing increment.²⁶¹ Commenters provided analysis and cited studies that suggest that 2 to 4 ticks intra-spread is optimal for trading,

which is consistent with the results of the Commission’s analysis.²⁶²

Some commenters agreed that the TWAQS was the appropriate measure for determining the relevant minimum pricing increment.²⁶³ Several commenters stated that as many stocks as possible should be identified as eligible for a smaller tick size.²⁶⁴ Other commenters suggested that a multi-factor approach be taken in evaluating whether to reduce the minimum pricing increment for certain NMS stocks.²⁶⁵ Commenters suggested that such factors include average quoted size,²⁶⁶ ratio of

²⁶² See, e.g., Nasdaq Letter I at 8, 18; Pragma Letter at 1; RBC Letter at 3; CCMR Letter at 23; Letter from Eric Swanson, Chief Executive Officer, XTX Markets LLC, dated Mar. 30, 2023 (“XTX Letter”) at 4; MMI Letter at 5; and Harris Letter at 7. See also *infra* notes 1293–1299 and accompanying text.

²⁶³ See, e.g., IEX Letter I at 7 (“[w]e agree that TWAQS is a reasonable and appropriate measure to define which securities should be subject to a narrower tick size.”); MEMX Letter; and BMO Capital Letter.

²⁶⁴ See, e.g., Form Letter Type K, of which 22 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>; Anonymous Letter dated Mar. 6, 2023; letter from Victor Piousbox dated Mar. 6, 2023; letter from Jimit Raihatha dated Mar. 7, 2023; letter from Munib Mian dated Mar. 7, 2023; letter from Peter Unum dated Mar. 19, 2023; letter from Anonymous dated Mar. 22, 2023; and letters from Chris and Donna Graves, dated Mar. 26, 2023; Spencer Neukam dated Mar. 26, 2023; Samuel Cressy dated Mar. 24, 2023; and Zaf Khan dated Mar. 24, 2023.

²⁶⁵ See, e.g., Cboe Letter II at 3 (“The most critical step in any tick-size regime reform is first establishing an objective methodology designed to address truly tick-constrained securities. In this regard, we recommend using a multi-factor methodology, such as Cboe’s Tick Size Reduction Framework.”); Themis Letter at 7 (supporting Cboe’s methodology); Cboe, State Street, et al. Letter; Optiver Letter (discussing the European Union’s tick regime as considering stock price and liquidity); NYSE Letter I; ICI Letter II at 11 (stating that applying other factors would lessen concerns about an overbroad tick reduction and mitigate concerns about an adverse market outcome); BlackRock Letter at 5 (stating that quoted spread is one-dimensional and does not provide sufficient context for determining the optimal tick size); Citigroup Letter (recommending a new \$0.005 quoting increment for the most liquid tick-constrained stocks); T. Rowe Price Letter (stating that a multi-factor approach would allow the Commission to measure whether a tick size is properly calibrated); STA Letter at 6 (recommending that the Commission use a multifactor approach); Virtu Letter II at 6 (stating “one must consider many factors, not just quoted spread” and describing methods proposed by Cboe and Nasdaq); NYSE, Schwab, and Citadel Letter at 1 (“We define ‘tick-constrained’ to mean symbols that have an average quoted spread of 1.1 cents or less and a reasonable amount of available liquidity at the NBBO.”); and Cambridge Letter at 6 (stating that securities should have an average quoted spread of 1.1 cents and be “reasonably liquid”). See also SIFMA Letter II at 36 (“SIFMA believes that a more robust analysis is necessary to evaluate the most appropriate tick sizes for purposes of achieving the best balance between available liquidity at the inside quotation versus narrower spreads.”).

²⁶⁶ See, e.g., BlackRock Letter at 6 (“... if material size was present at the National best Bid

²⁵¹ See, e.g., Pragma Letter at 6 (“tick-constrained stocks will benefit from smaller tick sizes with narrower spreads.”); MEMX Letter; NYSE, Schwab, and Citadel Letter; IEX Letter I at 7; Nasdaq Letter I at 2 (“Nasdaq supports adjusting the minimum pricing increment (“tick size”) to better reflect the trading dynamics of Regulation National Market System (“Reg. NMS”) securities.”); Brandes Letter at 2; Schwab Letter II at 35; and Robinhood Letter at 46.

²⁵² See, e.g., IEX Letter I; Pragma Letter; Invesco Letter; ICI Letter II at 14 (stating that the Commission should not apply sub-penny increments to stocks that are not tick-constrained); ASA Letter (“we strongly oppose the application of a one-half cent tick size to any stock outside of the most liquid (narrower spread) stocks.”); Nasdaq Letter I at 14 (“We propose that securities fall into this new \$0.005 tick bucket only if they are tick-constrained.”); and Cboe Letter II.

²⁵³ See Invesco Letter at 3. See also e.g., ICI Letter II (stating that there is no market failure or harm identified for stocks that are not tick-constrained.) and Brandes Letter at 2 (favoring a reduction to \$0.005 for those stocks that are experiencing constraint with the \$0.01 increment and stating that the proposed reduction in a minimum pricing increment for stocks that had a TWAQS of \$0.04 or less was too broad).

²⁵⁴ See, e.g., NYSE Letter I; Vanguard Letter; Cboe Letter I; and Schwab Letter II at 35–36. *But see also* Invesco Letter at 3 (stating that \$0.011 was overly broad and would result in unnecessary tick reductions for stocks that are not tick-constrained.).

²⁵⁵ See, e.g., IEX Letter I at 7 (“IEX agrees with the premise that tick sizes should be reduced for stocks that are currently “tick-constrained” or could easily become tick-constrained because of the current one-cent limitation.”).

²⁵⁶ See IEX Letter I at 7, 13 (“We believe that reducing the tick size and applying it to all securities with a TWAQS up to two cents will substantially improve the efficiency of displayed trading . . .”).

²⁵⁷ See BMO Capital Letter at 2 and Form Letter Type H, of which 853 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>.

²⁵⁸ See Pragma Letter at 6 (“While perhaps not conclusive, the lines of evidence from our analysis also suggest that the Proposal’s range of 4 to 8 ticks is too many and will force wider spreads and higher trading costs on the market than necessary. This leads to our primary recommendation: stocks should be moved to a smaller tick size only when their average spread is less than ½ in the preceding month; and moved to a larger tick size only when their spread is greater than 4 ticks in the preceding month.”).

²⁵⁹ See *infra* section VII.D.1.b for more discussion on TWAQS.

²⁶⁰ See *infra* note 1303 and accompanying text. See also Nasdaq Letter I at 18 (stating that “quoting outside of the optimal 2–3 tick spreads leads to queues for tick-constrained securities and slower price formation for securities with overly-wide spreads.”).

²⁶¹ See *infra* section VII.D.1.b.

average quoted size to average traded size,²⁶⁷ daily traded volume,²⁶⁸ queue length,²⁶⁹ quotes on multiple exchanges,²⁷⁰ or stock price.²⁷¹ One commenter recommended the inclusion of factors such as large quoted displayed size and a relatively high level of liquidity based on average daily trading volume.²⁷²

One commenter suggested that in addition to the TWAQS, “quote stability” should be measured.²⁷³ According to the commenter, quote stability would be measured by looking at a change in a stock’s quote after execution; if the quote widens after an execution, “the quoted liquidity may not be sufficient for the liquidity demanded, suggesting that the quote increment is not actually constraining quoting activity.”²⁷⁴ Another commenter suggested that the Commission consider using “spread leeway,” which the commenter defined as equal to the average quoted spread divided by the minimum tick size.²⁷⁵ The commenter stated that spread leeway could “effectively quantify the extent to which bid-ask spreads are

and Offer (‘NBBO’) or a significant proportion of executions were occurring at sub-penny prices, this would be a clear indication of fierce order book competition and interest to tighten the spread and trade in smaller increments.”); T. Rowe Price Letter; and Citadel Letter I.

²⁶⁷ See, e.g., Cboe Letter II at 3 (“we started with the complete universe of NMS securities, and applied three constraints—quoted spread, quoted-size-to-trade-size ratio, and notional turnover ratio—to arrive at a group of securities that are quantifiably tick-constrained.”) and BlackRock Letter.

²⁶⁸ See, e.g., BlackRock Letter at 5 (“BlackRock recommends that in addition to the time weighted quoted spread, the Commission should incorporate other factors for designating tick sizes, such as the average quoted size, ratio of average quoted size to average traded size, daily traded volume, or stock price.”); Optiver Letter; T. Rowe Price Letter; and Citadel Letter I.

²⁶⁹ See, e.g., T. Rowe Price Letter at 4 (“Other factors that could be considered include queue length and quoted size at the top of the order book, turnover, and whether the stock is quoted on multiple exchanges.”) and Citadel Letter I.

²⁷⁰ See, e.g., T. Rowe Price Letter at 4.

²⁷¹ See, e.g., BlackRock Letter at 5 and Optiver Letter (“[w]e recommend that the Commission undertake further analysis of the optimal level of tick granularity, leveraging price and volume to define appropriate tick sizes.”).

²⁷² See ICI Letter I at 11. See also Cambridge Letter at (stating that minimum pricing increments should be reduced for those stocks that have a TWAQS of \$0.011 or less and “are reasonably liquid.”) and Citigroup Letter at 4.

²⁷³ See, e.g., NYSE Letter I at 3. See also B. Riley Letter.

²⁷⁴ *Id.*

²⁷⁵ See MMI Letter (stating that spread leeway. . . “quantifies the extent to which bid-ask spreads are constrained by the minimum tick size. . . is equal to the average quoted spread divided by the minimum tick size. Prior studies have suggested a spread leeway of 3–9 as optimal for tick sizes to be neither too small, nor too large.”).

constrained by the minimum tick size.”²⁷⁶ Another commenter suggested that in addition to a TWAQS of \$0.011, there should be “balance or near equilibrium of multiple bids and offers at the top of the central order book” as this would “imply that market forces of supply and demand would naturally force the bid/ask spread tighter through market competition.”²⁷⁷ One commenter that recommended a multi-factor approach to identify NMS stocks suggested that in addition to average quoted spread, a high quoted size to traded size ratio and a high average daily notional turnover should be examined when identifying NMS stocks that are tick-constrained.²⁷⁸ According to the commenter, a high quoted size to traded size ratio is “an objective signal that shows even though there is an abundance of liquidity, the current \$0.01 tick constraint disincentivizes investors to cross the spread due to high costs, resulting in a lack of trade executions.”²⁷⁹ Further, the commenter stated that a high average daily notional turnover is “an objective signal because it focuses the tick reduction effort on high turnover securities that would benefit from the ability to be traded in finer increments.”²⁸⁰ Other commenters supported this approach.²⁸¹

After analyzing data to determine whether the suggested additional factors would be helpful in eliminating NMS stocks that could be harmed by a smaller minimum pricing increment,²⁸² the Commission has concluded that TWAQS is the appropriate measure to determine whether an NMS stock should be eligible for a smaller minimum pricing increment. Specifically, TWAQS provides a transparent and objective basis to determine whether the \$0.01 minimum pricing increment results in a quoted spread that is too wide for a particular NMS stock. Other possible factors, such as average quoted size, ratio of average quoted size to average trade size, the average daily traded volume, queue length, quotes on multiple exchanges or stock price, would add unwarranted and additional complexity that would be difficult and costly for market participants to monitor because some of these measures require the purchase of

²⁷⁶ *Id.* at 5.

²⁷⁷ See Invesco Letter at 3.

²⁷⁸ See Cboe Letter I and Cboe Letter II at 3. See also Cboe, State Street, et al. Letter; State Street Letter at 3.

²⁷⁹ See Cboe Letter I at 2.

²⁸⁰ *Id.*

²⁸¹ See, e.g., SIFMA Letter II at 40; Tastytrade Letter at 18; and Themis Letter at 4.

²⁸² See *infra* section VII.D.1.b.iii. for further discussions of alternative criteria.

proprietary data. Supplementing TWAQS with quoted size, turnover calculations, quote stability, and the other recommend criteria would similarly add additional complexity and responsibilities to the primary listing exchanges assigned to calculating TWAQS.²⁸³ The additional criteria suggested by commenters are unnecessary because TWAQS is a sufficient, comprehensive and objective way to determine whether NMS stocks are experiencing issues of constraint related to the \$0.01 minimum pricing increment for quotes and orders.²⁸⁴ Specifically, the Commission concluded that harm is unlikely to result if the other data factors suggested by commenters (e.g., price, volume, or depth-based criteria) are not included.²⁸⁵ Accordingly, the Commission is not adopting factors other than the TWAQS to measure which NMS stocks would be assigned a minimum pricing increment of \$0.005.

One commenter suggested that issuers should be able to select the minimum pricing increment for the quotes and orders of their stock.²⁸⁶ The Commission disagrees. Rule 612 is an important rule under Regulation NMS and serves to link the markets within the national market system by establishing uniform minimum pricing increments for all NMS stocks. This important linkage function would be undermined by allowing increments to be individually assigned to each NMS stock in a non-uniform manner. Rule 612, as originally adopted and as amended, standardizes minimum pricing increments based on transparent and objective criteria in order to ensure that minimum pricing increments are applied uniformly. Introducing issuer choice would eliminate such standardization and enable individual issuers to choose different minimum pricing increments based on their specific, unique individual preferences which would likely result in random and inconsistent application of increments across NMS stocks that otherwise share several relevant trading characteristics. Minimum pricing increment for quotes and orders of NMS stocks priced greater than, or equal to, \$1.00 per share based on unpredictable, opaque, non-standard criteria of individual issuers would result in unnecessary complication, such as varied minimum quoting increments

²⁸³ See Proposing Release, *supra* note 11, at 80274.

²⁸⁴ See *infra* section VII.D.1.b.iii.

²⁸⁵ See *infra* section VII.D.1.b.iii.

²⁸⁶ See Angel Letter at 5. *But see* Harris Letter at 8 (opposing suggestions that issuers should choose ticks).

and investor confusion, to the national market system. Further, market participants would likely incur additional costs related to, for example, the monitoring and tracking of the minimum pricing increments for issuers.

7. Rule 612(a)—Definitions

As adopted, amended Rule 612(a) contains two definitions for purposes of the rule—“Evaluation Period” and “Time Weighted Average Quoted Spread.” The primary listing exchanges will use these definitions in identifying the required minimum pricing increments for NMS stocks.

a. Evaluation Period

The Commission proposed to define “Evaluation Period” as the last month of a calendar quarter (March in the first quarter, June in the second quarter, September in the third quarter and December in the fourth quarter) of a calendar year during which the primary listing exchange shall measure the TWAQS of an NMS stock that is priced equal to, or greater than, \$1.00 to determine the minimum pricing increment to be in effect for the next calendar quarter, as set forth by proposed paragraph (c). In other words, the minimum pricing increment for quotes and orders would have been evaluated every quarter based on one month’s worth of data and could have potentially changed once every quarter.

After considering the comments, the Commission is adopting a revised definition of Evaluation Period. Rule 612(a)(1) defines Evaluation Period as (i) the three months from January through March of a calendar year and (ii) the three months from July through September of a calendar year during which the TWAQS of an NMS stock shall be measured by the primary listing exchange to determine the minimum pricing increment for each NMS stock.

The Commission received comments on the proposed definition of the Evaluation Period.²⁸⁷ Two commenters generally supported the definition as proposed.²⁸⁸

²⁸⁷ See, e.g., IEX Letter I; Optiver Letter; NYSE Letter I; Pragma Letter; MMI Letter; FIA PTG Letter II; BlackRock Letter; SIFMA Letter II; T. Rowe Price Letter; Cboe Letter I and Cboe Letter II; UBS Letter; and JPMorgan Letter at 4.

²⁸⁸ See, e.g., IEX Letter I and NYSE Letter I (stating that the quarterly updates based on the last month of a quarter’s data would “ensure that the next quarter’s universe of tick-constrained names is selected using the most recent and relevant basis and allows for monitoring of other securities that are not yet tick-constrained but maybe starting to exhibit tick-constrained behavior.”). IEX, however, recommended that the second month of a quarter be used for calculating the TWAQS. See also *infra*

Several commenters stated that one month was too short a period for measuring and calculating TWAQS.²⁸⁹ One commenter stated that an analysis of one month’s data “has the potential to disproportionately weigh systemic and idiosyncratic events (including corporate actions) resulting in unrepresentative tick sizes.”²⁹⁰ Another commenter stated that “longer evaluation periods will reduce the risk that short-term aberrations will have an outsized impact on market structure. Using too short of an evaluation period, especially during periods of heightened volatility, could lead to unrepresentative price variations that ultimately result in illogical minimum price increments.”²⁹¹ A few commenters recommended providing a longer period for conducting data analysis. Specifically, one commenter suggested that the time frame be “coterminous with the time between tick size changes. In other words, if tick sizes are adjusted every quarter, then the evaluation period should be every quarter . . .”²⁹² Another commenter suggested that the Evaluation Period should be at least one quarter.²⁹³ Another commenter recommended that the Evaluation Period be performed on an annual basis so as to reduce costs and operational risks that may be created by needing to update relevant systems.²⁹⁴ Finally, one commenter suggested that the evaluation of NMS stocks be conducted on a semi-annual basis, based on six-months of data, to reduce variability and complexity.²⁹⁵

A few commenters provided suggestions as to the length of time between tick adjustments.²⁹⁶ One commenter stated that ticks should be adjusted on a monthly basis rather than a quarterly basis.²⁹⁷ The commenter

note 305 and accompanying text. See also Harris Letter at 7.

²⁸⁹ See, e.g., Optiver Letter at 2; MMI Letter at 6; FIA PTG Letter II at 2; and UBS Letter at 13. See also Cboe Letter I at 5 (stating that the framework for reevaluating the parameters for revising tick changes according to their proposed methodology should be quarterly or bi-annually so that the parameters “remain nimble to changing market conditions.”).

²⁹⁰ See Optiver Letter at 2.

²⁹¹ See FIA PTG Letter II at 2–3. See also MMI Letter at 6 (“The evaluation period preceding the change should be at least one quarter to avoid capturing instances of market volatility, or events such as stock splits that may indirectly drive trading interest that cause the behavior and characteristics of a stock to depart dramatically from its history.”).

²⁹² See FIA PTG Letter II at 2–3.

²⁹³ See MMI Letter at 6.

²⁹⁴ See UBS Letter at 13.

²⁹⁵ See JPMorgan Letter at 4.

²⁹⁶ See Pragma Letter; UBS Letter; and BlackRock Letter. See also SIFMA Letter II.

²⁹⁷ See Pragma Letter at 1.

stated “[w]e would expect more frequent smaller updates to reduce how often and how long a stock’s tick stays outside the optimal range.”²⁹⁸ Another commenter, however, suggested that the Commission align tick adjustments with other elements in the proposal. Specifically, this commenter recommended that “the Commission reduce the frequency of changes and synchronize the intervals for revising market structure parameters by updating both round lots and tick sizes on a quarterly or semi-annual basis.”²⁹⁹ Another commenter suggested an annual consideration as a means to reduce burdens on market participants and reduce operational risks.³⁰⁰

After considering the comments on the length of the Evaluation Period, the amended rule will require that the TWAQS be measured over a longer period of time than proposed, *i.e.*, using three months’ worth of trading data instead of one month, and minimum pricing increments will be assigned on a less frequent basis, *i.e.*, every six months instead of every three months. The Commission conducted analysis to evaluate the length of the data analysis for the TWAQS and the length of time between minimum pricing increment assignments.³⁰¹ This revised definition balances the concerns raised by commenters that a TWAQS measured over too short a time frame could potentially be skewed by high volatility or unique events, such as corporate actions,³⁰² but that a TWAQS measured over too long of a time period would increase the probability of assigning a stale minimum pricing increment for quotes and orders that does not reflect the prevailing trading characteristics. Further, an annual evaluation would potentially cause some NMS stocks to remain in a sub-optimal minimum pricing increment for too long, while a monthly evaluation of NMS stocks would raise concerns about investor confusion with frequent re-assignments

²⁹⁸ See *id.*

²⁹⁹ See BlackRock Letter at 10. See also SIFMA Letter II (commenting on three different elements—ticks, access fee caps and round lots—that would have to be updated and stating “[b]roker-dealers will be required under the Tick Size Proposal to update their systems to appropriately account for all three of these variable changes, which carries inherent risks (and costs) of inadvertent errors relative to today’s environment where each of these variables are static.”). See also section V.B.3.b.iii for a discussion of the modifications to the round lot definition.

³⁰⁰ See UBS Letter at 12.

³⁰¹ See *infra* section VII.D.1.d for additional discussion on the three-month period.

³⁰² See *supra* note 290 and accompanying text. The suggestion that minimum pricing increments be updated on a monthly basis would raise these concerns.

and increase operational risks due to the need for frequent systems updates. The adopted semiannual evaluation addresses the potential burdens and concerns of an Evaluation Period that is either too long or too short.

Finally, two commenters recommended adding an implementation time period between the calculation of the TWAQS and the potential change to an NMS stock's minimum pricing increment.³⁰³ One commenter stated that the proposed rule "leaves little to no time for the industry to communicate the change and update systems to reflect the new tick sizes."³⁰⁴ Both commenters suggested that the rule should provide one month between the end of the data collection and the effectiveness of any new minimum pricing increments.³⁰⁵ One commenter stated that one month between the calculation of the TWAQS and the implementation of new tick sizes would "give the industry adequate time to process changes and minimize errors."³⁰⁶ Another commenter stated that the quarterly changes with short transition time would raise operational risk in the market and at individual firms.³⁰⁷ This commenter also stated that "[f]requent changes to tick sizes will require considerable investor education."³⁰⁸ The Commission agrees with commenters' suggestions and is also adopting an implementation period for introducing new minimum pricing increments after an Evaluation Period. As adopted, market participants will have one month to implement any new minimum pricing increments. This will reduce concerns about operational risk and will provide market participants with time to inform investors of any changes in placing orders. One month is an adequate time period for market participants to adapt and make any required systems change to reflect the change, if any, in minimum pricing increment of the quotes and orders of an NMS stock that is priced greater than, or equal to, \$1.00 per share. A longer period could partially nullify the objectives of the adopted rule to ameliorate issues related to the

constraint of stocks that are quoting at the \$0.01 minimum pricing increment.

As discussed below, the Commission has aligned the semiannual evaluation and implementation of minimum pricing increments and the dates for implementing any minimum pricing increments with the timing for changes to NMS stocks round lot assignment.³⁰⁹ The Commission agrees with commenters who recommended that these two evaluations and updates be conducted at the same time. This will lessen the burdens on the primary listing exchanges and market participants of implementing new minimum pricing increments and round lots. Further, it will lessen operational risks associated with frequent system updates.

Rule 612(a)(1) also requires that the TWAQS be measured for all NMS stocks by the primary listing exchange. One commenter requested clarification as to what would occur in volatile situations "where a low-priced stock (e.g., sub \$1.00) suddenly jumps to a higher price (e.g., \$8.00)."³¹⁰ This situation could occur under preexisting Rule 612 as the relevant minimum pricing increment is based on the price of the order or quote. However, because orders in an NMS stock can be submitted with prices at or above \$1.00 and below \$1.00 depending on its current market price, under the amended rule, each NMS stock must have its TWAQS measured so that a minimum pricing increment will be assigned for those orders that are priced at or above \$1.00. Therefore, as amended, all NMS stocks will be assigned a minimum pricing increment based on its TWAQS and investors will be able to understand the relevant minimum pricing increment for their orders when priced at or over \$1.00 and when priced under \$1.00. Under the rule, as adopted, quotes and orders in NMS stocks that are priced less than \$1.00 will continue to have a minimum pricing increment of \$0.0001.³¹¹ The operation of the amended rule is consistent with how the preexisting rule operates in that quotes and orders for a particular NMS stock may be required to be priced in a \$0.01 or \$0.005 increment when the price of an order is equal to or greater than \$1.00 and may also be priced in a \$0.0001 increment when the price of an order is less than \$1.00.

b. Time Weighted Average Quoted Spread

The Commission proposed to define TWAQS as the average dollar value

difference between the NBB and NBO during regular trading hours where each instance of a unique NBB and a unique NBO is weighted by the length of time that the quote prevailed as the NBB or NBO. The Commission did not receive any comments on the definition of TWAQS.³¹² The definition in Rule 612(a)(2) is adopted as proposed.

8. Rule 612(b)(1)—Semiannual Operative Dates

Rule 612, as adopted, contains amended paragraph (b)(1), which defines the operative dates for the minimum pricing increments assigned to each NMS stock and provides a month-long time period to implement potentially new minimum pricing increments at the end of each Evaluation Period. Specifically, minimum pricing increments for quotes and orders will be operative on the first business day of May following the Evaluation Period from January through March and the first business day of November following the Evaluation Period from July through September.³¹³ In adopting these operative dates, the Commission seeks to reduce the risk that market participants may not be fully staffed during the time that technology changes are necessary to implement new minimum pricing increments. Further, in addition to providing market participants with adequate time to make necessary systems changes, the implementation period will also provide adequate time for investors to be notified about the minimum pricing increment for the quotes and orders of NMS stocks that are priced equal to or greater than \$1.00.³¹⁴

Two commenters requested clarification as to how stock splits would be handled.³¹⁵ Once assigned under Rule 612(b)(1), minimum pricing increments will remain operative until the next operative date (i.e., May or November). Therefore, a stock split will not impact an NMS stock's minimum pricing increment until the next cycle. In order to avoid the complexity and confusion that could occur if the minimum pricing increment of NMS stocks were reassigned at unpredictable times, minimum pricing increments will

³¹² As discussed above, the Commission received comment on whether there should be factors in addition to the TWAQS for determining whether an NMS stock is tick-constrained. See *supra* section III.C.6.

³¹³ See *supra* section III.C.7.a, for a discussion of the adopted Evaluation Period.

³¹⁴ See *supra* note 303 and accompanying text.

³¹⁵ See SIFMA Letter II at 42 and Virtu Letter II at 20.

³⁰³ See T. Rowe Price Letter and IEX Letter.

³⁰⁴ See T. Rowe Price Letter at 4.

³⁰⁵ See IEX Letter I at 7 (suggesting that the Commission provide "one month between the end of data collection and the beginning of trading with the reallocated tick sizes, in order to avoid any unanticipated disruptions.") and T. Rowe Price Letter.

³⁰⁶ See T. Rowe Price Letter at 4.

³⁰⁷ See Fidelity Letter at 13.

³⁰⁸ See Fidelity Letter at 13. See also Harris Letter at 7 (recommending mechanisms to ensure traders can determine relevant ticks).

³⁰⁹ See also *infra* section V.B.3.b.iv.

³¹⁰ See SIFMA Letter I at 43.

³¹¹ See Rule 612(b)(3).

not be changed during the time between operative dates.

9. Rule 612(c)—New NMS Stocks

Commenters asked for clarification on how new NMS stocks would be handled under Rule 612.³¹⁶ One commenter questioned how new NMS stocks and IPOs would be assigned minimum pricing increments and stated that allowing exchanges to assign different initial tick sizes could lead to “arbitrage of issuers choosing the exchange that offers the most favorable initial tick size.”³¹⁷ Another commenter stated that “the simplest and most intuitive alternative would be to use specifications which were previously considered to be the standard unit, such as a \$0.01 tick size.”³¹⁸ The Commission agrees. New NMS stocks will be assigned the same initial minimum pricing increment under Rule 612(c), which requires all securities that become an NMS stock to be assigned to the minimum pricing increment of \$0.01.³¹⁹ Thereafter, the TWAQS of the NMS stock will be calculated during the next Evaluation Period to determine which minimum pricing increment will be required under Rule 612(b)(2). Sub-penny increments are limited to quotes and orders priced \$1.00 or more for those NMS stocks that have a demonstrated narrow TWAQS during the defined Evaluation Period; new NMS stocks that become eligible for trading during an operative period will not satisfy this requirement. New NMS stocks will have their TWAQS calculated during the next Evaluation Period after they start trading.

10. Rule 600(b)(89)—Regulatory Data

The Commission proposed to amend the definition of regulatory data in Rule 600(b)(78)³²⁰ to require the primary listing exchange for each NMS stock to calculate and provide to competing consolidators, self-aggregators, and the exclusive SIPs an indicator of the applicable minimum pricing increment required under Rule 612. The Commission is adopting the minimum pricing increment indicator, as proposed, under the definition of regulatory data in Rule 600(b)(89)(i)(F). A minimum pricing increment indicator will be useful to market participants, including investors, by providing

important information about the relevant minimum pricing increment for each NMS stock. This indicator will help market participants, including investors, with submitting orders in the relevant increment. Because the minimum pricing increment can change on a semiannual basis depending on the TWAQS on an NMS stock, this indicator will enable market participants to trade in a more informed manner. The indicator will be included in SIP data that is disseminated by the exclusive SIPs and consolidated market data³²¹ disseminated by competing consolidators, which will help to ensure the wide availability of information about the applicable minimum pricing increment for each NMS stock.

One commenter supported the minimum pricing increment indicator stating that it would make the new increments easier to implement.³²² This commenter suggested that the exclusive SIPs publish the indicator every morning, in a machine-readable format, and free of charge.³²³

The exclusive SIPs currently provide certain information that comprises regulatory data as part of SIP data.³²⁴ Under the rule, the exclusive SIPs will be required to collect and disseminate a new regulatory data element, the minimum pricing increment indicator, and collect and disseminate this regulatory data element as part of SIP data.³²⁵ To the extent that the exclusive SIPs charge fees for this new regulatory data element, such fees will be required to be filed under rule 608 of Regulation NMS and must be fair and reasonable and not unreasonably discriminatory.³²⁶ The Commission has not required a specific format for SIP data, including regulatory data; such format will be developed by the Operating Committees’ for the Equity Data Plans consistent with regulatory requirements.³²⁷

D. Minimum Pricing Increment for Trades

The Commission proposed to amend Rule 612 to introduce minimum pricing increments for trades of NMS stocks where the minimum pricing increment for trading NMS stocks priced at or

above \$1.00 would vary and correlate to one of the four proposed minimum pricing increments for quoting (*i.e.*, \$0.001, \$0.002, \$0.005 and \$0.01), subject to proposed exceptions for midpoint trades and benchmark trades.³²⁸ The proposed minimum pricing increments for trades would have harmonized trading increments (1) with the proposed variable minimum pricing increments for quotes and orders (in this release, “Quote and Trade Harmonization”), and (2) across all trading venues (in this release, “Venue Harmonization”). Specifically, Quote and Trade Harmonization would have required all trading to occur in the same increments as those required of quotes and orders subject to certain exceptions for midpoint and benchmark trades. Venue Harmonization would have required all trading on exchanges, ATSS and OTC to occur in the same pricing increments.

In the Proposing Release,³²⁹ the Commission stated that it was concerned about the competitive dynamic between exchanges, ATSS, and OTC markets and that a potential contributing factor was the ability of OTC market makers to execute orders in price increments that are smaller than the price increments that exchanges and ATSS can practically provide.³³⁰ The Commission stated that applying the minimum pricing increment to trades across all venues would promote equal regulation and fair competition among market participants such as exchanges, OTC market makers and ATSS, particularly as it relates to retail order flow;³³¹ and that it was “reasonable to assume that . . . [applying] a minimum pricing increment to trades . . . , could result in greater competition between exchanges and ATSS with other OTC market makers, including wholesalers”³³² However, the Commission also stated that it could not anticipate how OTC market makers would adjust to increased competitive pressure and whether a market-wide trading increment would yield a

³²⁸ The Commission also proposed to impose a minimum pricing increment for trades for quotes and orders priced less than \$1.00 that would have been the same as the minimum pricing increment for quotes, *i.e.*, \$0.0001. See Proposing Release, *supra* note 11, at 80283.

³²⁹ See Proposing Release, *supra* note 11, at 80268–69.

³³⁰ See Proposing Release, *supra* note 11, at 80283.

³³¹ See Proposing Release, *supra* note 11, at 80283.

³³² See Proposing Release, *supra* note 11, at 80303.

³¹⁶ See SIFMA Letter II at 42; BlackRock Letter at 10; Virtu Letter II at 18.

³¹⁷ See SIFMA Letter II at 42; Virtu Letter II at 18.

³¹⁸ See BlackRock Letter at 10.

³¹⁹ See also section V.B.3.b.iii.

³²⁰ Preexisting Rule 600(b)(78) was subsequently renumbered to Rule 600(b)(89) by the Rule 605 Amendments. See Rule 605 Amendments, *supra* note 10.

³²¹ See rule 600(b)(24).

³²² See MMI Letter at 6.

³²³ See MMI Letter at 6.

³²⁴ See MDI Adopting Release, *supra* note 10, at 18729 for a description of the regulatory messages that are disseminated by the exclusive SIPs.

³²⁵ See Rule 600(b)(89)(iv).

³²⁶ Sections 11A(c)(1)(C) and 11A(c)(1)(D) and Rule 603(a). See MDI Adopting Release, *supra* note 10, at 18684.

³²⁷ The SIP data format will be available at the SIP’s website, <https://www.ctaplant.com/index>.

“positive, negative or neutral” net effect on retail price improvement.³³³

The Commission received several comments on the proposal to establish minimum pricing increments for trades, including comments related to Quote and Trade Harmonization.³³⁴ Venue Harmonization,³³⁵ statutory authority,³³⁶ rationale,³³⁷ impact on price improvement,³³⁸ exceptions to minimum pricing increment for trades,³³⁹ and exchange RLP programs.³⁴⁰ After considering comments and in light of changes from the proposal that the Commission is making to amended Rule 612, the Commission has decided, consistent with one of the Reasonable Alternatives set forth in the Proposing Release,³⁴¹ not to adopt a minimum pricing increment for trades. As described above, the Commission is amending Rule 612 to adopt one smaller minimum pricing increment for quotes and orders that primarily focuses on those NMS stocks that are experiencing constraint with the \$0.01 minimum pricing increment. A secondary impact of the changes to the

minimum quoting increment should be that it helps to partially address the concerns related to fair competition between exchanges, ATSS, and OTC markets that proposing a market-wide trading increment was designed to address.

Amended Rule 612 will reduce the minimum pricing increment for quotes and orders to \$0.005 for certain NMS stocks that are priced equal to, or greater than, \$1.00 per share which in turn also effectively reduces the increment that such stocks are able to trade in. Under amended Rule 612, OTC markets will continue to be able to trade more readily in comparatively smaller increments (e.g., \$0.001 or \$0.0001) than exchanges and ATSS, however, exchanges and ATSS will now be able to trade more regularly at smaller increments (i.e., \$0.005 or \$0.0025), compared to preexisting Rule 612, for those NMS stocks that are assigned the \$0.005 minimum pricing increment. By effectively reducing the trading increment for such NMS stocks, which represent a significant amount of the daily trading volume (approximately 58%) and dollar volume (approximately 43%),³⁴² the potential trade pricing discrepancy between exchanges, ATSS and OTC markets, while not harmonized, will be reduced. Market participants will be able to better compete based on the pricing of quotes and orders. Thus, because reducing the minimum quoting increment for a significant amount of volume of NMS stocks, whether measured by trading or dollars, also effectively reduces the trading increments for those stocks, the concerns related to the ability of OTC market makers to trade in comparatively finer increments raised by the Commission in the Proposing Release will be partially addressed so that the Commission has determined not to adopt the minimum pricing increment for trading.

However, because the amendment to Rule 612 only partially addresses the competitive dynamic between OTC market makers and exchanges and ATSS described in the Proposing Release, and furthermore allows OTC market makers to continue to execute trades in comparatively finer increments, the Commission staff will continue to monitor sub-penny trading to evaluate whether further action is appropriate for the protection of investors and to assure “fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets” in the national market system.

The Commission’s simplified, incremental approach to amending Rule 612 focuses on addressing issues that have developed regarding quoting constraints for certain NMS stocks because of the \$0.01 minimum pricing increment. Further, the amendment to Rule 612 will facilitate the transition of market participants and investors to the new tick size regime and the wider use of sub-penny quoting. The amendment, as adopted, also reduces the anticipated implementation costs compared to the proposed amendments to Rule 612. Finally, under amended Rule 612: (1) RLPs³⁴³ that operate pursuant to Commission exemptions that either permit certain quoting and trading in increments of \$0.001,³⁴⁴ or aggregate order flow at the midpoint,³⁴⁵ will be able to continue to operate without interruption and without changes to exchange rules or the grant of further exemptive relief by the Commission; (2) sub-penny price improvement will continue to be permitted consistent with the requirements of the rule; (3) and investors will continue to be able to manage their order flow and implement trading strategies through the use of midpoint orders and benchmark trades.

IV. Final Rule 610 of Regulation NMS—Fees for Access to Quotations

The Commission is adopting amendments to Rule 610(c)(1)(ii) as proposed with technical modifications to remove the reference to the minimum pricing increment. The Commission is not adopting proposed Rule 610(c)(1)(i) because it is unnecessary.³⁴⁶ Further, the Commission is adopting amendments to Rule 610(c)(2) as proposed with modifications to align the access fee caps for protected quotations in NMS stocks priced below \$1.00 and those priced \$1.00 and above.³⁴⁷ Finally, the Commission is removing outdated references to the “The Nasdaq Stock Market, Inc.” in Rule 610(c), as proposed, because the Nasdaq Stock Market is now a national

³³³ See Proposing Release, *supra* note 11, at 80326.

³³⁴ See, e.g., Nasdaq Letter I at 17; Citadel Letter I at 31; State Street Letter at 4; Citigroup Letter at 5; MFA Letter at 7, Letter from Nandini Sukumar, Chief Executive Officer, World Federation of Exchanges, dated Mar. 30, 2023 (“World Federation of Exchanges Letter”) at 5, STA Letter at 7, NYSE Letter I at 6; Nasdaq Letter I at 17, NYSE, Schwab, and Citadel Letter at 2, Brandes Letter at 2; Schwab Letter II at 6, Cambridge Letter at 6; B. Riley Letter at 1, Vanguard Letter at 5, Robinhood Letter at 40, 55; JPMorgan Letter at 6.

³³⁵ See, e.g., Cboe Letter II at 9, IEX Letter I at 2, Nasdaq Letter I at 2, Citigroup Letter at 5, Pragma Letter at 1, Luke Peterson Letter; Chris Miller Letter, Amanda Kappes Letter.

³³⁶ See Citadel Letter I at 4 and Robinhood Letter at 28.

³³⁷ See Citigroup Letter at 5, Nasdaq Letter I at 16, World Federation of Exchanges Letter at 4, Better Markets Letter I at 13, Vanguard Letter at 4, IEX Letter III at 5, Drew Ferguson Letter at 1, Max Garrison Letter at 1, Lukas Boller Letter at 1, Trent Miller Letter at 1, Phillip Worts Letter at 1, James Letter at 1, Andrew Garley Letter at 1, Larry Douglas Letter at 1, Steve Sullivan Letter at 1, Luke Czarnota Letter at 1, Charles S Letter at 1, Melissa Virginillo Letter at 1, Melissa Hyer Letter at 1, Keagan Wethington Letter at 1, DH Letter at 1, Alex Riley Letter at 1, Trevor Capestany at 1, Marco Daebnitz at 1, Steven Sullivan Letter at 1. See also Patrick Sexton, EVP, General Counsel & Corporate Secretary, Cboe Global Markets, Inc., dated Aug. 23, 2023 (“Cboe Letter III”) at 9.

³³⁸ See, e.g., SIFMA Letter II at 4, Citigroup Letter at 5, TradeStation Letter at 6, CCMR Letter at 27, Virtu Letter II at 7, Fidelity Letter at 13, BlackRock Letter at 9, Robinhood Letter at 20, JPMorgan Letter at 6, Morgan Stanley Letter at 4, TastyTrade Letter at 20 and Nasdaq Letter I at 18.

³³⁹ See, e.g., JPMorgan Letter at 5; ICI Letter I at 17–18, Vanguard Letter at 5; IEX Letter I at 17 and BlackRock Letter at 9.

³⁴⁰ See, e.g., Cboe Letter III at 10–11, IEX Letter I at 17–18, JPMorgan Letter at 6, Ontario Teachers et al. Letter at 2, NYSE Letter I at 6.

³⁴¹ See Proposing Release, *supra* note 11, at 80339.

³⁴² See *infra* section VII.D.1.a.

³⁴³ See *supra* note 146.

³⁴⁴ See, e.g., NYSE Rule 7.44 and BX Rule 4780.

³⁴⁵ See, e.g., NYSE Arca Rule 7.44–E and IEX Rule 11.232.

³⁴⁶ The Commission is not adopting the proposed 5 mils access fee cap because it is not adopting the \$0.001 minimum pricing increment. As proposed, all protected quotes in NMS stocks priced \$1.00 or more that would have been assigned a minimum pricing increment other than \$0.001 would have been subject to the proposed 10 mils access fee cap. The Commission is adopting this same model—all protected quotes in NMS stocks priced \$1.00 or more will be subject to the 10 mils access fee cap.

³⁴⁷ See *infra* section VII.D.2.a.

securities exchange and the language is redundant.³⁴⁸

Specifically, under Rule 610(c), as amended, a trading center³⁴⁹ will not be permitted to impose, or permit to be imposed, any fee or fees for the execution of an order against a protected quotation of the trading center or against any other quotation of the trading center that is the best bid or best offer of a national securities exchange or the best bid or best offer of a national securities association in an NMS stock that exceed or accumulate to more than \$0.001 per share if the price of the protected quotation or other quotation is \$1.00 or more, and the fee or fees will not be permitted to exceed or accumulate to more than 0.1% of the quotation price per share if the price of the protected quotation or other quotation is less than \$1.00.

The Commission is also adopting Rule 610(d) as proposed to require that all exchange fees and rebates be determinable at the time of execution. For the reasons discussed below, these amendments to Rule 610 are appropriate for the modern national market system.

A. Background

Rule 610(c) was adopted in furtherance of the Congressional directives in section 11A of the Exchange Act and was designed to promote fair and non-discriminatory access to quotations displayed in the national market system.³⁵⁰ Rule 610(c) seeks to ensure the fairness and accuracy of displayed quotations by establishing an outer limit on the cost of accessing such quotations³⁵¹ and was designed to help to ensure that orders placed in the national market system reflect the best prices available. The access fee caps are necessary to achieve the purposes of the Exchange Act, including section 11A(c)(1)(B) of the Exchange Act, which authorizes the Commission to adopt rules assuring the fairness and usefulness of quotation information. The Commission has stated that for quotations to be fair and useful, “there must be some limit on the extent to which the true price for those who access quotations can vary from the displayed price.”³⁵²

Rule 610 was adopted at the same time as Rule 611, the Order Protection Rule, which established intermarket protection against trade-throughs³⁵³ for all NMS stocks. Rule 610(c) was designed to preclude trading centers that posted protected quotations from raising their fees in an attempt to take improper advantage of the trade-through protections adopted under Rule 611.³⁵⁴ The Commission designed the access fee caps to preserve the benefits of the strengthened price protection under Rule 611 and more efficient linkages among trading centers that were developed under Regulation NMS to access protected quotations that could be disrupted if substantial fees were charged.³⁵⁵ At the time of adoption, the Commission recognized the importance of protecting the best displayed and accessible prices in promoting deep and stable markets that minimize investor costs. In this regard, the Commission stated that Rule 611 would help to minimize investor transaction costs, which is “the hallmark of efficient markets” and a “primary objective of the [national market system].”³⁵⁶ Rule 610 is an important component in supporting these goals.

Market participants, including investors, need fair and efficient access to the best priced quotations in the national market system. Therefore, Rule 610(c) remains an important part of the national market system to achieve the purposes of the Exchange Act, preserve the benefits of price protection, and help ensure that displayed quotations reflect something close to actual costs incurred for the transaction.³⁵⁷

³⁵³ A trade-through occurs when a trading center executes an order at a price that is inferior to the price of a protected quotation that is displayed by another trading center. See 17 CFR 242.600(b)(105) for the definition of trade-through under Regulation NMS.

³⁵⁴ See Regulation NMS Adopting Release, *supra* note 4, at 37544 and 37595.

³⁵⁵ See Regulation NMS Adopting Release, *supra* note 4, at 37545.

³⁵⁶ See Regulation NMS Adopting Release, *supra* note 4, at 37498.

³⁵⁷ The access fee caps were calculated based upon the then current fees that were charged by certain trading venues. See Regulation NMS Adopting Release, *supra* note 4, at 37545 (stating “the \$0.003 fee limitation is consistent with current business practices, as very few trading centers currently charge fees that exceed this amount . . . [and those that do] do not account for a large percentage of the trading volume.”). At the time the access fee caps were adopted, the minimum pricing increment for quotes and orders priced \$1.00 or greater was \$0.01 as Rule 612 was adopted at the same time as Rule 610(c).

B. Issues Raised in the Existing Market Structure and the Need for the Amendments

The national market system of 2024 is significantly different than the national market system that existed when Regulation NMS was adopted in 2005.³⁵⁸ Since Regulation NMS was adopted, new trading practices, order types, and routing strategies have developed that did not exist when Rule 610 was adopted.³⁵⁹ In addition, exchanges have developed complex fee structures that charge the outer limits permitted for accessing protected quotations and use those fees to fund rebates, which have the effect of creating a discrepancy between displayed prices and net prices.³⁶⁰ Finally, the national market system has seen a proliferation of new exchanges, often within the same exchange group, that implement varied pricing models to attract specific market participants to their markets.³⁶¹ The Commission has monitored these developments and engaged extensively with market participants about the impact of the modern fee structures on fair and efficient access to protected quotations as well as the usefulness and accuracy of such quotations.³⁶²

Market participants have considered and suggested reductions in the access fee caps for many years to address market distortions (as further discussed

³⁵⁸ See Proposing Release, *supra* note 11, at 80289. See also Letter from John Ramsay, Chief Market Policy Officer, Investors Exchange LLC, dated Oct. 19, 2023 (“IEX Letter IV”) at 5–10; Nasdaq Letter I at 4.

³⁵⁹ See also Letter from Theodore R. Lazo, Managing Director & Associate General Counsel, SIFMA, to Brent J. Fields, Secretary, Commission, dated Mar. 29, 2017, at 8 (stating exchanges have developed order types primarily designed to avoid paying high fees, market participants implement complex routing strategies (consistent with their best execution obligations) to avoid paying high exchange access fees in favor of lower costs ATSS and the market place has seen a high level of fragmentation “driven by each exchange group’s desire to provide a variety of pricing models within the wide pricing range between 0 and 30 mils.”) (“SIFMA 2017 Letter”).

³⁶⁰ See *infra* section VII.C.2, note 1107 and accompanying text and note 1457 (showing that the primary reason that access fees remain near 30 mils on most exchanges is to fund rebates) and Panel A of table 4, *infra* section VII.C.2.c.

³⁶¹ See *infra* tables 4 and 5 showing within the large exchange groups multiple exchanges each with different fee and rebate models. See also e.g., SIFMA 2017 Letter, *supra* note 359 at 8 (stating “the high level of fragmentation . . . is in part driven by each of the exchange group’s desire to provide a variety of pricing models within the wide pricing range between 0 and 30 mils.”).

³⁶² For example, the EMSAC considered, among other things, whether the access fee cap should be modified. See EMSAC Archives, *supra* note 4. See also Concept Release on Equity Market Structure, *supra* note 59.

³⁴⁸ See Proposing Release, *supra* note 11, at 80292.

³⁴⁹ 17 CFR 242.600(b)(106).

³⁵⁰ The Commission also stated that by imposing a uniform fee limitation of \$0.003 per share, Rule 610(c) will promote equal regulation of different types of trading centers. See Regulation NMS Adopting Release, *supra* note 4, at 37595.

³⁵¹ See Regulation NMS Adopting Release, *supra* note 4, at 37502.

³⁵² See Regulation NMS Adopting Release, *supra* note 4, at 37545.

below)³⁶³ and better reflect evolutions in the market since Regulation NMS was adopted.³⁶⁴ One commenter stated that

³⁶³ See, e.g., *infra* notes 371–376 and accompanying text and *infra* section IV.B.2 and IV.D.

³⁶⁴ See, e.g., Letter from Theodore R. Lazo, Managing Director & Associate General Counsel, SIFMA, to Brent J. Fields, Secretary, Commission, dated May 24, 2018, at 2 (commenting on File No. S7–05–18 “Transaction Fee Pilot for NMS Stocks”) (stating “On several occasions, SIFMA has recommended that the Commission reduce the access fee cap to no more than five cents per 100 shares because the cap has not been adjusted to reflect market developments since Regulation NMS was adopted more than a decade ago.”) (“SIFMA 2018 Letter”); Goldman 2018 Letter at 1 (stating “a reduction in the Fee Cap from \$0.0030 to \$0.0010 per share could be supported today [2018] and would be better calibrated with the present-day trading and execution costs, which have decreased substantially since 2005”); SIFMA 2017 Letter, *supra* note 359, at 3 (stating the Commission should consider “reducing the access fee cap to no more than \$0.0005 for all securities” because “[s]ince Reg. NMS was adopted, spreads have narrowed and commissions have decreased, making the existing cap of access fees outsized relative to today’s market realities.”); Letter from Theodore R. Lazo, Managing Director & Associate General Counsel, SIFMA, to Mary Jo White, Chair, Commission, dated May 24, 2015, at 2–3 (supporting reduction in access fee to “no more than five cents per hundred shares” because access fees are “an outsized element of transaction costs that in turn distorts price discovery and contributes to market complexity, both on- and off-exchange” and further stating “market participants regularly implement complex order routing strategies . . . that divide, route and re-route orders and parts of orders, when possible, to market centers that enable them to avoid paying excessive access fees” and also stating “access fees have increased complexity on exchanges . . . through the proliferation of exchange order types designed to avoid access fees.”); Letter from Daniel Keegan, Managing Director, Head of Americas Equities, Citigroup Global Markets Inc. to Elizabeth Murphy, Secretary, Commission, dated Aug. 7, 2014, at 5 (“Citigroup 2014 Letter”) (commenting on Concept Release on Equity Market Structure and stating “[t]he SEC should explore the impacts on the overall markets of complex market structure issues such as maker/taker pricing and access fees” and “[a]t a minimum, the cap on access fees should be reduced to below 10 mils”); Letter from Theodore R. Lazo, Director & Associate General Counsel, SIFMA, to Mary Jo White, Chair, Commission, dated Oct. 24, 2014, at 2 (providing “Recommendations for Equity Market Structure Reforms” including “that exchange access fees be significantly reduced, to no more than five cents per 100 shares”); NYT Dealbook OpEd: How to Improve Market Structure, Curt Bradbury, Chief Operating Officer, Stephen’s Inc. and Kenneth E. Bentsen, Jr., President and CEO, SIFMA (SIFMA Market Structure Task Force Recommendations), dated July 14, 2014 (stating “Access fees charged by exchanges and other venues should be dramatically reduced, if not eliminated. While brokers are legally required to route their orders to the exchange that is quoting the best price—so called ‘protected quotes’—the exchanges are permitted to charge relatively high fees for accessing these quotes: currently 30 cents for every 100 shares. These fees have distorted market pricing as they are a significant percentage of overall trading costs and are several times higher than the fees charged by off-exchange venues. As a result, brokers often avoid routing their orders to exchanges. Exchanges also rebate most of their access fee revenue through price structures such as ‘maker/taker.’ These developments have led to a proliferation of order

“[d]igital innovations and efficiencies since 2005 have undoubtedly reduced the costs of collecting, storing, processing, and transmitting information” and that “despite reduced costs, increased efficiency, and all the new data and computing power available, the access fee cap has remained fixed at an inflated level that reflects the technology capabilities of 2005.”³⁶⁵

1. Amendments to Rule 612

As discussed above, the Commission is adopting a smaller minimum pricing increment of \$0.005 for certain NMS

types designed to avoid access fees and capture rebates, and that proliferation, in turn, adds complexity to the system, requires continuing technology changes and creates potential for market instability. The Securities and Exchange Commission should reduce the current cap on access fees to no more than 5 cents per 100 shares, and indeed should consider eliminating access fees altogether.”); Bradley Hope & Scott Patterson, “NYSE Plan Would Revamp Trading,” WALL ST. J. (Dec. 17, 2014), available at <http://www.wsj.com/articles/intercontinental-exchange-proposing-major-stock-market-overhaul-1418844900> (stating that since 2005, when the fee cap of \$0.003 per share was chosen, competitive and technological advancements have led to decreased costs (spreads and commissions), and as a result, access fees have become a larger portion of overall transaction costs); ICE’s Six Recommendations for Reforming Markets,” WALL ST. J. (Dec. 18, 2014), available at <http://blogs.wsj.com/moneybeat/2014/12/18/ices-six-recommendations-for-reforming-markets/> (recommending reduction in the access fee cap to \$0.0005 in conjunction with adoption of a “trade at” rule, “eliminating maker-taker pricing” and stating “[w]ith myriad different make-take and take-make pricing models in existence today, we believe the potential conflicts and complexity that ensue from the maker-taker models outweigh any perceived benefits. We believe there are better options available to incentivize market-makers to maintain two-sided quotes and reduce intraday volatility” including incentive programs that would obligate market makers to provide liquidity); Joe Ratterman, Chief Executive Officer, & Chris Concannon, President, BATS, “Open Letter to U.S. Securities Industry Participants Re: Market Structure Reform Discussion,” at 1 (Jan. 6, 2015), available at <http://cdn.batstrading.com/resources/newsletters/OpenLetter010615.pdf> (stating access fee cap “requires a substantial reduction and restructuring” and further stating the cap “has remained unchanged for far too long and has never been reevaluated for potential market distortions given the substantially altered broker models and reductions in commissions since the implementation of Regulation NMS.”).

³⁶⁵ See IEX Letter IV at 8. See also e.g., Letter from Paul M. Russo, Managing Director, Goldman Sachs & Co. LLC, to Brent J. Fields, Secretary, Commission, at 3 (May 24, 2018), available at <https://www.sec.gov/comments/s7-05-18/s70518-3711788-162473.pdf> (“Goldman 2018 Letter”) (commenting on File No. S7–05–18 “Transaction Fee Pilot for NMS Stocks”) at 2 (stating in 2018 “In the thirteen years since the Commission adopted the Fee Cap, spreads have considerably narrowed and commission rates have contracted. However, the Fee Cap has remained unadjusted. There is a well-developed, general consensus among market participants that a [30 mil] per share Fee Cap is an outdated benchmark for execution costs in today’s trading environment. As a limit, it creates an upper-range that is simply too high and far from representative of true prices in the marketplace.”).

stocks. Because the Commission is adopting the smaller \$0.005 increment, it is also amending the preexisting access fee caps in Rule 610(c) to prevent introducing new pricing distortions in the market.³⁶⁶ For protected quotations priced \$1.00 or more, the Commission is adopting a 10 mil access fee cap and has decided that this level is appropriate based on several additional considerations, as discussed in the following sections.

2. Exchange Fee Models

The exchange fee structures in the national market system that have developed under Rule 610 are complex and consist of fees charged and rebates paid to market participants. As stated above, exchanges using a “maker-taker” pricing model, pay a rebate to a “maker” or provider of liquidity, which is funded by the fees charged to a “taker” of liquidity.³⁶⁷ The exchange earns as revenue the difference between the fee paid by the taker and the rebate paid to the provider or maker.³⁶⁸ For maker-taker exchanges, the amount of the taker fee is limited by the access fee caps imposed by Rule 610(c). The Rule 610(c) access fee caps apply to the fees assessed on an incoming order that executes against a resting protected quote, but do not apply to the rebates. However, the Rule 610(c) access fee caps indirectly limit the average amount of the rebates that an exchange offers to about \$0.0030 per share in order to maintain net positive transaction revenues. Thus, an exchange may charge higher access fees to fund higher

³⁶⁶ See *infra* section VII.D.2.a.

³⁶⁷ See SRO fee schedules, which are available on each SRO’s website. See also *infra* section VII.C.2.c, table 4. This discussion focuses on exchange fees because, currently, exchanges are the only trading centers that display protected quotations. If an ATS or OTC market maker displayed a protected quotation, its fees would be subject to the access fee caps under Rule 610(c).

³⁶⁸ A few exchanges have adopted a “taker-maker” pricing model (also called an inverted model), in which they charge a fee to the provider of liquidity and pay a rebate to the taker of liquidity. See, e.g., Nasdaq BX fee schedule available at http://www.nasdaqtrader.com/trader.aspx?id=bx_pricing (as of Feb. 2024); NYSE National fee schedule available at https://www.nyse.com/publicdocs/nyse/regulation/nyse/NYSE_National_Schedule_of_Fees.pdf (as of Jan. 1, 2024); Cboe BYX fee schedule available at https://www.cboe.com/us/equities/membership/fee_schedule/byx/ (as of Feb. 2024); and Cboe EDGA fee schedule available at https://www.cboe.com/us/equities/membership/fee_schedule/edga/ (as of Feb., 2024). See also *infra* section VII.C.2.c, table 4. For taker-maker exchanges, the amount of the maker fee charged to the provider of liquidity is not bounded by the Rule 610(c) access fee cap because such fee is not a charge to access the market’s best bid/offer for NMS stocks, but such fees typically are no more than \$0.0030.

liquidity rebates.³⁶⁹ Some exchanges state that rebates are necessary in order for them to attract trading volume.³⁷⁰

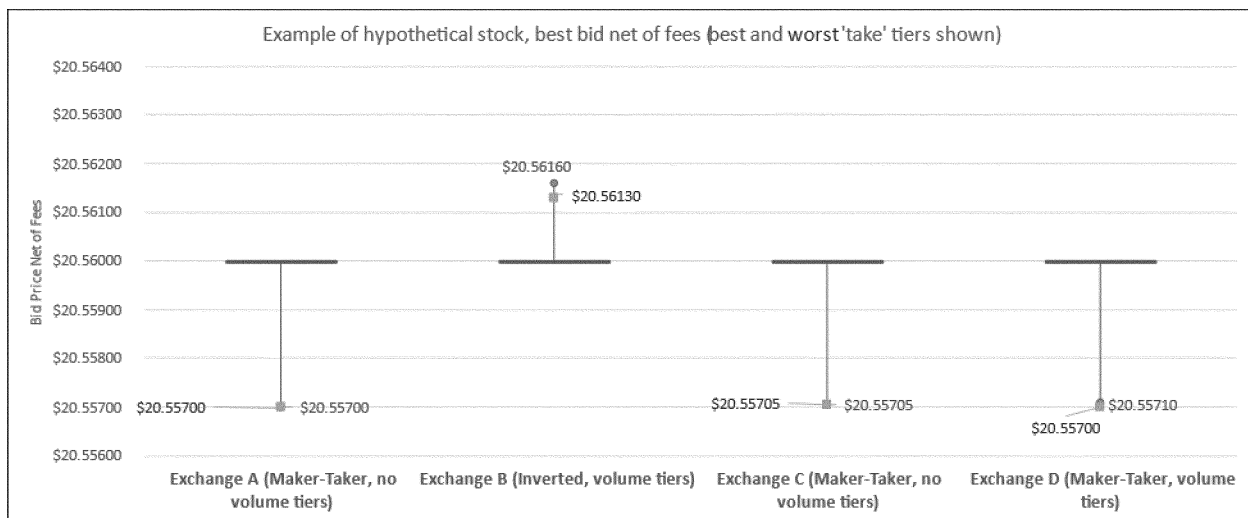
In recent years, a variety of concerns have been stated about the prevailing maker-taker fee model, and particularly the rebates paid by the exchanges. Those include that the fee/rebate models: (1) undermine market transparency since displayed prices do not account for exchange transaction fees or rebates and therefore do not reflect the net economic costs of a trade;³⁷¹ (2) serve as a way to effectively quote in sub-penny increments on a net basis when the effect of a maker-taker exchange's sub-penny rebate is taken into account even though the minimum quoting increment is expressed in full

pennies;³⁷² (3) introduce unnecessary market complexity through the proliferation of new exchange order types (and new exchanges) designed solely to take advantage of pricing models;³⁷³ (4) drive orders to non-exchange trading centers that do not display quotes as market participants seek to avoid the higher fees that exchanges charge to subsidize the rebates they offer to attract liquidity;³⁷⁴ and (5) benefit sophisticated market participants like market makers and proprietary traders at the expense of other market participants.³⁷⁵ Further, the prevailing access fee structure creates potential conflicts of interest for broker-dealers, who must provide the best execution to their customers' orders

while facing potentially conflicting economic incentives to avoid fees or earn rebates from the trading centers to which they direct those orders for execution.³⁷⁶

a. Transparency

The chart below illustrates with a hypothetical example the Commission's concern that exchange fee/rebate models can undermine price transparency. While some investors may invest heavily to fully map out the fee schedules, these schedules are complex and thus doing so would be costly, consequently it is likely that not all investors fully map out fee schedules.³⁷⁷



The Commission examined data for NMS stocks to demonstrate the price variations that can occur under the exchange fee and rebate schedules. The chart above shows a common scenario

for a hypothetical stock, with four exchanges all displaying the same best bid of \$20.56. However, due to differing fee schedules, each of the four represents a different net bid to market

participants. Furthermore, due to volume-based price fee tiers, some exchanges' net bids differ for different market participants. The fee schedules used to create this example are taken

³⁶⁹ This was one of the concerns the Commission identified when it approved the access fee caps. See Regulation NMS Adopting Release, *supra* note 4, at 37545. ("[T]he fee limitation is necessary to achieve the purposes of the Exchange Act. Access fees tend to be highest when markets use them to fund substantial rebates to liquidity providers, rather than merely to compensate for agency services.").

³⁷⁰ See, e.g., Letter from Patrick Sexton, EVP, General Counsel & Corporate Secretary, Cboe Global Markets, Inc., dated Apr. 5, 2024 ("Cboe Letter IV") at 2–5; Letter from Brett Kitt, Vice President, Deputy General Counsel, Nasdaq, Inc., dated Mar. 25, 2024 ("Nasdaq Letter IV") at 3–5; Nasdaq Letter III at 2–5.

³⁷¹ See, e.g., Letter from Richard Steiner, Global Equities Liaison to Regulatory & Government Affairs, RBC Capital Markets, to Elizabeth Murphy, Secretary, Commission, at 2–3 (Nov. 22, 2013), available at <https://www.sec.gov/comments/s7-02-10/s70210-411.pdf> ("RBC Capital Letter") (commenting on potential equity market structure initiatives).

³⁷² See, e.g., Larry Harris, "Maker-Taker Pricing Effects on Market Quotations," at 24–25 (Nov. 14, 2013).

³⁷³ See, e.g., Curt Bradbury, Market Structure Task Force Chair, Board of Directors, SIFMA, and Kenneth E. Bentsen Jr., President and Chief Executive Officer, SIFMA, Opinion, "How to Improve Market Structure," N.Y. Times (July 14, 2014), available at http://dealbook.nytimes.com/2014/07/14/how-to-improve-market-structure/?_r=0 (stating that the "proliferation of order types designed to avoid access fees and capture rebates . . . adds complexity to the system, requires continuing technology changes and creates potential for market instability" and recommending access fees charged by exchanges be "dramatically reduced, if not eliminated"); RBC Capital Letter at 2; and Letter from Haim Bodek, Managing Principal and Stanislav Dolgoplov, Regulatory Consultant, Decimus Capital Markets, LLC, dated Apr. 25, 2016, at 3 and 11 ("Decimus 2016 Letter"); Vanguard Letter at 6.

³⁷⁴ See, e.g., Menkveld, Albert J., Bart Zhou Yueshen, and Haoxiang Zhu, "Shades of darkness: A pecking order of trading venues," *Journal of*

Financial Economics 124, no. 3 (2017) at 503–534, available at https://www.mit.edu/~zhuh/MenkveldYueshenZhu_2017JFE_dark.pdf; RBC Capital Letter at 2.

³⁷⁵ See, e.g., RBC Capital Letter at 2–4; Letter from Mehmet Kinak, Vice President—Global Head of Systematic Trading & Market Structure, and Jonathan Siegel, Vice President—Senior Legal Counsel (Legislative & Regulatory Affairs), T. Rowe Price, to Brent J. Fields, Secretary, Commission, dated June 12, 2018, at 2, available at <https://www.sec.gov/comments/s7-05-18/s70518-3832746-162769.pdf> (sec.gov) (commenting on File No. S7–05–18 "Transaction Fee Pilot for NMS Stocks").

³⁷⁶ See, e.g., Stanislav Dolgoplov, "The Maker-Taker Pricing Model and its Impact on the Securities Market Structure: A Can of Worms for Securities Fraud?" 8 Va. L. & Bus. Rev. 231, 270 (2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2399821 (retrieved from SSRN Elsevier database).

³⁷⁷ See *infra* section VII.C.2.c and table 4 therein for additional analysis and discussion of the complexity of fee and rebate schedules.

from various exchange fee schedules as of June 2024. Exchange A charges the maximum allowed access fee of 30 mills, and so market participants that trade with the Exchange A bid receive a net price of \$20.557 per share (\$20.56 minus a \$0.003 fee). Exchange B has an inverted “taker-maker” fee schedule and so pays a rebate to participants who remove liquidity, with differing rebates based on volume tiers. In this example, a market participant that trades with the bid on Exchange B receives a net price of \$20.5616 if in the best tier (\$20.56 plus a \$0.0016 rebate). Exchange C charges an access fee of 29.5 mills, meaning that a market participant that trades with the Exchange C bid would receive a net price of \$20.55705 per share (\$20.56 minus the \$0.00295 fee). Lastly, Exchange D charges an access fee of 29 mills to those in the best tier, so such a participant trading with Exchange D receives a net price of \$20.5571. Despite all four exchanges showing the same bid of \$20.56, the bids net of fees vary from a low of \$20.557 to a high of \$20.5616, a substantial difference of \$0.0046 per share (nearly half the current minimum pricing increment).

b. Liquidity and the NBBO

The price of liquidity for investors in terms of buying and then later selling a security is the spread between the best bid and the best offer, which is reflected by the NBBO. For those market participants that provide liquidity, such as market makers, this spread similarly represents the market price for providing those liquidity services at any given point in time. More recently, trading center models that pay rebates to liquidity providers (which rebates are funded on a transaction basis by charging an access fee to the taker of liquidity) pay an additional return to the liquidity provider separate from what would be captured through the spread, which may then lead those liquidity providers to lower the spread (that is, the implicit price for their liquidity provision services) more than they would otherwise.³⁷⁸ These prices are reflected in the NBBO, which is disseminated in the national market system.

Others have stated that the maker-taker model has positive effects by enabling exchanges to compete with non-exchange trading centers and by narrowing quoted spreads through subsidizing posted prices,³⁷⁹ but these

potential benefits should be balanced against the market distortions associated with the fee and rebate models mentioned above.³⁸⁰ Further, rebates paid to liquidity providers under maker-taker fee schedules may narrow displayed spreads in some securities by subsidizing liquidity providers (*i.e.*, by allowing a maker to post a more aggressive price than it may have in absence of a rebate), and these prices may not reflect the underlying economics for the NMS stock.³⁸¹ In turn, that displayed liquidity may establish the NBBO,³⁸² which is often used as the benchmark for marketable order flow, including retail order flow, that is executed off-exchange by either matching or improving upon those distortive prices.³⁸³ Accordingly, rebates may distort quotation prices that are displayed in the national market system.³⁸⁴

High rebates also incentivize excessive intermediation,³⁸⁵ especially in very liquid securities, to the extent rebates induce or exacerbate an oversupply of liquidity at the best bid or offer.³⁸⁶ As discussed below, some stocks will trade with a quoted spread one tick wide, whether the tick size is \$0.01 or \$0.005. In those cases, quoted spread is unable to adjust lower due to the tick size, so the rebate paid to liquidity providers, which is funded by

(“Nasdaq Letter II”) at 5–6; Larry Harris, “Maker-Taker Pricing Effects on Market Quotations,” at 5 (Nov. 14, 2013), available at https://en-coller.tau.ac.il/sites/nihul_en.tau.ac.il/files/media_server/Reconati/management/seminars/account/Maker.pdf; Letter from Richie Prager, Managing Director, Head of Trading and Liquidity Strategies, BlackRock, Inc., to Mary Jo White, Chair, SEC, at 2 (Sept. 12, 2014), available at <https://www.sec.gov/comments/s7-02-10/s70210-419.pdf>; Michael Brolley & Katya Malinova, “Informed Trading and Maker-Taker Fees in a Low Latency Limit Order Market,” at 2 (Oct. 24, 2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2178102.

³⁸⁰ As discussed throughout, these concerns include, for example, undermining price transparency, introducing unnecessary complexity through the proliferation of new exchange order types and order routing strategies, added market fragmentation, creating or exacerbating potential conflicts of interest between brokers and their customers, and in NMS stocks that are tick constrained, assessing a higher cost to liquidity demanders.

³⁸¹ See also *infra* sections VII.B.3 and VII.C.2.

³⁸² See also *infra* sections VII.B.3 and VII.C.2.

³⁸³ See, e.g., Concept Release on Equity Market Structure, *supra* note 59 (evaluating broadly the performance of market structure since Regulation NMS, particularly for long-term investors and for businesses seeking to raise capital, and soliciting comment on whether regulatory initiatives to improve market structure are needed).

³⁸⁴ See *infra* section VII.A and *infra* notes 1733 and 1734 and accompanying text.

³⁸⁵ See *infra* note 1005.

³⁸⁶ See Proposing Release, *supra* note 11, at 80292. See also *infra* note 1005 and accompanying text.

an access fee paid by liquidity takers, acts as a wealth transfer from liquidity takers to liquidity providers. This wealth transfer in turn unnecessarily incentivizes the provision of liquidity (*i.e.*, encourages providing liquidity in order to earn the rebate), thereby creating an environment with too much liquidity supplied relative to liquidity demanded and leading to rebates for faster liquidity suppliers and a higher cost to liquidity takers.³⁸⁷ In other words, excessive quoting in tick-constrained securities to earn rebates undermines price transparency because displayed prices and the associated size at those prices do not reflect the underlying economics of supply and demand, but rather reflect the impact of fees or rebates.³⁸⁸

c. Potential Conflicts of Interest

As more fully discussed below and in the Economic Analysis, access fees and rebates create potential broker-dealer conflicts of interest in order routing, particularly to the extent the fees and rebates are not passed through to the customer.³⁸⁹ For example, this structure can create an incentive for a broker-dealer that fully absorbs transaction costs or rebates potentially to route customer orders to an exchange in order to avoid fees that are paid by the broker-dealer or to receive the highest rebate paid.³⁹⁰ Lowering the access fees caps will help alleviate potential conflicts of interest.³⁹¹

d. Market Complexity

Exchange fee and rebate models under preexisting Rule 610(c) have also led to the development of a variety of complex order types, including those that allow market participants to avoid paying access fees or to ensure that rebates are collected.³⁹² Further, exchange fee and rebate models are another way exchanges differentiate themselves from each other and from other trading centers to attract order flow. The

³⁸⁷ See *infra* section VII.D.2.

³⁸⁸ See *infra* note 1005 and accompanying text.

³⁸⁹ See *infra* sections IV.D.1.b and VII.D.2.c. See also Proposing Release, *supra* note 11, at 80330.

³⁹⁰ See, e.g., Vanguard Letter at 6.

³⁹¹ See *infra* section VII.D.2.d.

³⁹² Examples of such complex order types include post-only orders or add-liquidity only orders that seek to only provide liquidity to gain a rebate and will not upon entry, execute against a resting order on the other side of the market so as to avoid paying a transaction fee. See, e.g., BZX Rule 11.9(c)(6) (defining a BZX Post Only Order); MEMX Rule 11.16(i)(6) (defining Post Only); Nasdaq Equity, Rule 4702(4)(A) (defining a Post-Only Order); NYSE Rule 7.31(e)(2) (defining an ALO Order); NYSE Arca Rule 7.31(e)(2) (defining an ALO Order). See also Staff Report on Algorithmic Trading in the U.S. Capital Markets (Aug. 5, 2020), available at https://www.sec.gov/files/Algo_Trading_Report_2020.pdf.

³⁷⁸ See also *infra* section VII.B.3.

³⁷⁹ See, e.g., Letter from John A. Zecca, Executive Vice President, Global Chief Legal, Risk and Regulatory Officer, Nasdaq, Inc., dated Aug. 9, 2023

variability of fee and rebate models (often within the same exchange group) introduces additional market complexity and fragmentation because it encourages the creation of new exchanges that offer different pricing structures to attract different types of market participants or trading strategies. Moreover, the drive to establish novel and competitive fee schedules results in frequent fee schedule changes (typically on a monthly basis), which adds uncertainty and complexity to the marketplace because market participants must continually update their routing tables to reflect these price changes.³⁹³ A higher cap allows for a wider range of possible access fees (*i.e.*, \$0–\$0.0030) and more variability in exchange fees, which introduces additional complexity to the market.³⁹⁴

C. Proposal To Amend 610(c)

To accommodate the amendments to Rule 612 and to address the issues that have developed with the fee schedules for protected quotes under Rule 610(c), the Commission proposed to amend Rule 610(c) by reducing the level of the access fee caps for all protected quotations in NMS stocks. For protected quotations in all NMS stocks priced \$1.00 or more, the proposal introduced two lower access fee caps to accommodate the proposed minimum pricing increments under proposed Rule 612 for quotations priced equal to or greater than \$1.00 per share.³⁹⁵ Specifically, for all protected quotations in NMS stocks priced \$1.00 or more per share and assigned a proposed minimum pricing increment greater than \$0.001, the Commission proposed a 10 mil access fee cap; and for all protected quotations in NMS stocks priced \$1.00 or more per share and assigned the proposed \$0.001 minimum pricing increment, the Commission proposed a 5 mil access fee cap. For all protected quotations in NMS stocks priced less than \$1.00 per share, the Commission proposed to reduce the access fee cap to 0.05% of the quotation price.³⁹⁶

The Commission received many comments on the proposed amendments to Rule 610(c). The comments are discussed more fully below.

D. Final Rule 610(c)

The amended access fee caps reflect several considerations by the Commission as well as input from

commenters. For protected quotations priced \$1.00 or more, the Commission is adopting a 10 mil access fee cap. This level is appropriate based on several considerations. First, because the Commission is adopting the \$0.005 increment for certain NMS stocks under amended Rule 612, it is also reducing the level of the preexisting access fee caps in Rule 610(c) in order to prevent the price distortions that would occur if access fees were able to be set at more than half of the minimum pricing increment (*i.e.*, a protected quotation with an access fee that exceeds half the minimum pricing increment economically would be represented at the next less aggressive pricing increment).³⁹⁷ A 10 mil access fee cap is sufficiently below the smallest minimum pricing increment (*i.e.*, \$0.005) so as to not create new pricing distortions.³⁹⁸

Second, in adopting the 10 mil access fee cap, the Commission also considered the impact of the reduction on the agency market business model. A 10 mil access fee cap is at a level that will allow the exchanges to maintain their current net capture for executions of NMS stocks priced \$1.00 or greater.³⁹⁹

The 10 mil access fee cap also should help to reduce distortions and complexities under the fee structures that have developed under the preexisting access fee caps levels.⁴⁰⁰ As discussed above, under the preexisting access fee caps, many exchanges charge access fees at or near the highest permitted levels under preexisting Rule 610(c) as a means to fund rebates.⁴⁰¹ Access fees charged at the highest level permitted under the preexisting rule and the rebates they fund harm price transparency because the displayed price does not accurately reflect the underlying economics of a decision to post a protected quotation at a particular price (*i.e.*, the market participant's assessment of the price of liquidity for

the security is distorted by the subsidy provided by the rebate), or to access a protected quotation at a particular price (*i.e.*, the displayed price does not reflect the additional cost of the access fee).⁴⁰² The negative impact on price transparency is exacerbated when various exchanges have different fees and rebates and make frequent updates to those rates, making the comparison of net prices unnecessarily complex and difficult.⁴⁰³

Further, reducing the level of the access fee caps to the adopted levels will reduce complexity in the market because it will (1) reduce the incentives to use certain complex order types that are designed to avoid high fees/garner large rebates, (2) potentially reduce the number of fee changes in the market and accompanying frequent changes to complex order routing strategies, and (3) may discourage further market fragmentation.⁴⁰⁴ Reducing the amount of rebates by reducing the access fee caps to 10 mils also will reduce the magnitude of potential conflicts of interest in the market.

Finally, in determining to adopt the 10 mil access fee cap, the Commission has considered input from commenters, including market participants. Commenters stated that the reduced 10 mil access fee cap will better reflect current market rates and the increased efficiencies from electronic trading and other market structure changes, all of which have reduced trading costs since Rule 610 was originally adopted.⁴⁰⁵

In addition, the Commission is retaining the uniform access fee cap structure whereby the access fee caps are assigned based solely upon the price of the protected quotation. In other words, the Commission is adopting the 10 mil access fee cap for all protected quotes priced \$1.00 or more. Maintaining the preexisting uniform structure of the access fee caps helps ensure that the requirements under Rule 610(c) do not increase the fee structure complexity or introduce unintended consequences (such as oscillations) that would create additional costs for market participants.⁴⁰⁶

³⁹⁷ See Proposing Release, *supra* note 11, at 80290. See also *infra* notes 1423–1424 accompanying text and section VII.D.2.a. As discussed in greater detail below, the amendments to Rule 612 do not include the proposed \$0.001 minimum pricing increment, as proposed. Therefore, although the Commission proposed a 5 mil access fee cap to correspond to the \$0.001 minimum pricing increment, the 5 mil access fee cap is not necessary because the Commission is not adopting the proposed \$0.001 minimum increment. See *infra* section IV.D.1.a.

³⁹⁸ See *infra* section VII.D.2.a.

³⁹⁹ See *infra* sections IV.D.1.c and VII.D.2.b.

⁴⁰⁰ See *infra* sections IV.D.1.c. and IV.D.1.d.

⁴⁰¹ See Proposing Release, *supra* note 11, at 80288. See also *infra* sections IV.D.1.b. and VII.C.2.c, specifically table 4. While Rule 610(c) limits the fees assessed against an incoming order that executes against a resting protected quote, it does not address the rebates that may be paid.

⁴⁰² See *infra* section VII.D.2.a.

⁴⁰³ See *infra* note 1096 and adjacent text and section VII.C.2.c, table 4 (analyzing fee and rebate schedules and stating the current structure of fees and rebates is complex and constantly changing).

⁴⁰⁴ See *infra* section VII.D.2.d.

⁴⁰⁵ See, *e.g.*, Better Markets Letter I at 16; Brandes Letter at 3; Ontario Teachers et al. Letter at 1–2; IEX Letter IV at 7–8; Verret Letter III at 5–6; Letter from John Ramsay, Chief Market Policy Officer, Investors Exchange LLC, dated Apr. 19, 2024 (“IEX Letter VI”) at 4. See also *supra* IV.D.1 (discussing comment letters).

⁴⁰⁶ See *infra* section VII.D.2.d.

³⁹³ See *infra* note 1081 and accompanying text.

³⁹⁴ See *supra* note 361 and *infra* note 1764.

³⁹⁵ See Proposed Rule 610(c); Proposing Release, *supra* note 11, at 80269.

³⁹⁶ See Proposed Rule 610(c); Proposing Release, *supra* note 11, at 80269.

Further, the Commission is also reducing the level of the access fee cap for NMS stocks priced under \$1.00 to 0.1% of the quotation price in order to maintain the preexisting structure as well as to harmonize that cap with the adopted 10 mils cap for NMS stocks priced at \$1.00 or more. The harmonization will prevent different fees on quotes above and below \$1.00 that could negatively impact price formation.⁴⁰⁷ These considerations are consistent with the analysis and rationale the Commission used when it adopted the access fee caps in 2005.⁴⁰⁸

Lowering the access fee caps to these levels and maintaining the preexisting uniform structure will promote the statutory objectives of fair and efficient access to protected quotes and will help to ensure the fairness and usefulness of protected quotations⁴⁰⁹ because the amended access fee caps will lead to transaction pricing that is better aligned with today's market dynamics.⁴¹⁰ Recalibrating the level of the caps will yield savings for investors and help to address distortions in the markets while maintaining the ability of the trading centers that display protected quotations to continue to provide execution services, innovate and compete because they will be able to retain the same fees (net of any rebates) for executions that are priced \$1.00 or more,⁴¹¹ notwithstanding the reduction

of the fee cap to 10 mils.⁴¹² The Commission has balanced the competing interests of reducing the cap to address the amendments to Rule 612 and market distortions associated with the fee/rebate models that have developed under the preexisting fee caps, with the importance of preserving the viability of multiple agency market business models. The amended 10 mils access fee cap will lead to improved market quality because it will reduce distortions in the market and preserve the integrity of displayed prices, which will support sufficient price discovery, and will reduce costs for investors.⁴¹³

1. Comments on Proposed Rule 610(c)

Many comments from a broad cross section of market participants supported the need to reduce the access fee caps in preexisting Rule 610(c).⁴¹⁴ Many individual commenters stated that the reduced access fee caps would help to reduce trading costs.⁴¹⁵ One individual commenter stated “[a]s a retail trader, I

have experienced the high costs of access fees, which can be a significant portion of my trading costs. The proposed reduction in access fee caps will help to lower my costs, which will allow me to take advantage of more trading opportunities and ultimately benefit from a more efficient market.”⁴¹⁶ Other commenters also stated that a reduction in the access fee caps would reduce trading costs for investors.⁴¹⁷

Some commenters stated that the proposal would enhance transparency⁴¹⁸ and would reduce complexity.⁴¹⁹ As discussed above, the reduced access fee caps will enhance transparency of protected quotes and reduce complexity in the market by reducing the need for complex order types that have developed to accommodate the fee/rebate models.

Among the commenters that supported a reduction in the access fee caps,⁴²⁰ several stated that the amendments to Rule 612 to reduce tick sizes would necessitate a reduction in the access fee caps for those securities assigned a smaller tick,⁴²¹ while many others stated that the preexisting access fee cap should be lowered to 10 mils per share for protected quotations in all NMS stocks priced at \$1.00 or more regardless of whether there was a reduction in tick size.⁴²² As discussed

⁴¹² See *infra* section IV.D.1.c. See also Proposing Release, *supra* note 11, at 80290–91.

⁴¹³ See *infra* section VII.D.2. See also Proposing Release, *supra* note 11, at 80292 and at 80309 (stating because “compensation is above what would exist in a competitive market there is an increased incentive to provide liquidity via limit orders, so queues of limit orders tend to be longer, wait times to get a limit order executed also tend to be longer, and, thus the likelihood that the market moves away from an investor's limit order increases, leading to lower overall fill rates for limit orders”) and at 80329 (stating “[t]he primary beneficiaries of the reduction in the access fee cap would be liquidity demanders. For stocks with narrow spreads such as tick-constrained stocks, a 30 mil access fee can increase the cost of demanding liquidity by as much as 60%. Consequently, reducing the access fee significantly reduces the cost of demanding liquidity in the predominant maker-taker trading environment. This effect coupled with the expected decrease of liquidity suppliers can be expected to decrease competition to provide liquidity. Less competition to provide liquidity means that queue lengths could decrease and fill rates increase because it would be easier to get to the front of the order book. This effect could allow non high frequency traders more opportunity to fill orders using liquidity-providing instead of liquidity-demanding transactions.”). See also IEX Letter IV at 2, 6–8.

⁴¹⁴ See, e.g., IEX Letter IV at 1; IEX Letter VI at 1; Better Markets Letter II at 1; We The Investors Letter dated Mar. 30, 2023 at 2; Letters from Chris Robinson, dated Mar. 3, 2023; William Bledsoe, Jr., dated Feb. 28, 2023; Ryan Macarthur, dated Feb. 24, 2023; Julio Tello, dated Feb. 24, 2023; David Genco, Jr., dated Feb. 24, 2023; John, dated Feb. 23, 2023; Citigroup Letter at 3; BlackRock Letter at 10–11; Better Markets Letter I at 16; ASA Letter at 5; Vanguard Letter at 2; Invesco Letter at 2; JPMorgan Letter at 6; Ontario Teachers et al. Letter at 1–2; Budish Letter at 1; Mark Rogers Letter, dated Mar. 30, 2023; Grant Medford Letter, dated Mar. 30, 2023; Jared Albert Letter, dated Mar. 28, 2023; Steven Tripari Letter (“Tripari Letter”), dated Mar. 28, 2023; Peter McKornack Letter, dated Mar. 29, 2023; Verret Letter III at 26.

⁴¹⁵ See, e.g., Julio Tello, dated Feb. 24, 2023; Ryan Macarthur, dated Feb. 24, 2023; David Genco, Jr., dated Feb. 24, 2023; John, dated Feb. 23, 2023; Budish Letter at 1.

⁴¹⁶ Julio Tello, dated Feb. 24, 2023.

⁴¹⁷ See, e.g., Ontario Teachers et al. Letter at 2; Brandes Letter at 3; Boston Partners, Calamos Advisors, Glenmede Investment, and Janus Henderson Letter.

⁴¹⁸ See, e.g., Grant Medford Letter, dated Mar. 30, 2023; Verret Letter III at 24; BlackRock Letter at 10–11.

⁴¹⁹ See, e.g., Budish Letter at 1; Boston Partners, Calamos Advisors, Glenmede Investment, and Janus Henderson Letter.

⁴²⁰ See, e.g., IEX Letter IV at 1; MEMX Letter at 22; Biotechnology Innovation Organization Letter at 1; Brandes Letter at 3; Letter from Allison Bishop, President, Proof Services LLC, dated Mar. 31, 2023 (“Proof Letter”) at 1; BlackRock Letter at 10–11; Verret Letter I at 1, 2 and 4; MFA Letter at 13.

⁴²¹ SIFMA Letter II at 39; Invesco Letter at 4; Nasdaq Letter I at 19; Better Markets Letter II at 3–4.

⁴²² IEX Letter IV at 1; IEX Letter I at 6 and 21; Better Markets Letter I at 16; Better Markets Letter II at 4; Ontario Teachers et al. Letter at 2; Brandes Letter at 3; Boston Partners, Calamos Advisors, Glenmede Investment, and Janus Henderson Letter (supporting Brandes' Letter); Healthy Markets Letter I at 24; Themis Letter at 7–8; Letter from Andrew Hartnett, President and Deputy Commissioner, Iowa Insurance Division, North American Securities Administrators Association, Inc., dated Mar. 31, 2023 (“NASAA Letter”) at 1 and 9; ASA Letter at 5; Vanguard Letter at 6; JPMorgan Letter at 6; Capital Group Letter at 4; Pragma Letter at 7; Invesco Letter at 4; Verret Letter I at 8; XTX Letter at 5; Letter from Jeffrey P. Mahoney, General Counsel, Council of Institutional Investors, dated Mar. 30, 2023 (“Council of Institutional Investors Letter”) at 3; BMO Letter at 3; and BlackRock Letter at 10–11.

⁴⁰⁷ See *infra* section VII.D.2.c.

⁴⁰⁸ See generally, Regulation NMS Adopting Release, *supra* note 4.

⁴⁰⁹ Section 11A(c)(1)(B) of the Exchange Act. See Regulation NMS Adopting Release, *supra* note 4, at 37545.

⁴¹⁰ See *infra* section VII.D.2.b. As discussed below, the level of the adopted access fee cap for protected quotes in NMS stocks priced \$1.00 or more is consistent with the current level charged by some trading centers that do not post protected quotes and therefore are not subject to the preexisting access fee caps under Rule 610(c). Specifically, the fees charged by some ATSs for execution services are often in the range of 10 mils for access to their liquidity. See *infra* note 1118 and accompanying text and *infra* section VII.C.2. This level reflects a competitive rate for providing access to liquidity, and hence represents a reasonable level for amending the access fee caps for protected quotes. See also e.g., Goldman 2018 Letter at 4 (stating “a reduction of the Fee Cap to \$0.0010 per share is reasonable and would be better calibrated with today's market pricing.”). According to one commenter, while the “overwhelming proportion of transaction volume executed on national stock exchanges is subject to the maximum access fee of 30 mils. . . volume executed on ATS's and other venues outside of exchanges is typically subject to substantially lower costs of access, in the range of ten mils and lower.”). IEX Letter IV at 8.

⁴¹¹ See also *infra* sections VII.C.2 and VII.D.2, and table 14. As discussed below, the Commission estimates for purposes of this release that exchange net capture is 2 mils while also recognizing that net capture can range from approximately 2 to 6 mils. See *infra* note 1103.

below, the Commission has decided to maintain the uniform access fee cap structure and continue to apply the caps to all protected quotes based on price. The Commission has decided that reducing the caps for all protected quotes, not just those that may be assigned the smaller \$0.005 minimum pricing increment, is appropriate to address the distortions that exist in the national market system. Further, maintaining the uniform structure will help to ensure that the rule does not increase complexity in the national market system.

Several commenters stated that modifications to reflect the significant evolution in market conditions since the caps were established almost two decades ago are long overdue.⁴²³ One commenter stated that the current access fee caps are “antiquated.”⁴²⁴ Another commenter stated that the access fee caps are “outdated” and “counter to the interests of long term investors.”⁴²⁵ The Commission is reducing the access fee caps to accommodate the amendments to Rule 612. Further, retaining a uniform access fee cap structure will benefit the market by introducing less complexity and help to address market distortions that have arisen under the current fee caps. The current market structure has experienced significant changes in trading dynamics and operates under a fee structure that is different from when Rule 610(c) was adopted and problematic for the reasons articulated throughout this release. As discussed above and in the Economic Analysis, the amendment modernizes Rule 610(c) to reflect current trading dynamics and mitigate distortions associated with the preexisting caps while preserving its original objectives.

Some individual commenters recommended that the proposal be modified to go further to address distortions in the market related to the current fee and rebate models.⁴²⁶ A few commenters stated that the access fee caps should be eliminated entirely.⁴²⁷ One commenter stated that “competitive

forces should inform access fees.”⁴²⁸ Another commenter stated that the “solution is to let brokers take fees into consideration in their order routing . . . and route to the market with the best all-in costs,” which would obviate the need for the Commission to “get into the price control business.”⁴²⁹

While some commenters suggested that access fees be further reduced or eliminated altogether, the Commission is not eliminating fees for access to protected quotes. Rule 610(c) establishes limits on the amount of fees that can be charged for access and when the Commission adopted Rule 610(c), the Commission recognized that agency market trading centers have historically relied, at least in part, on charging fees for access. Eliminating or prohibiting access fees entirely would unduly harm the business model of agency market trading centers by not allowing them to collect fees for the execution services they provide.⁴³⁰ As discussed below, the national securities exchanges are the only trading centers at this time that display protected quotations and they should be able to continue to charge for the execution services they provide.⁴³¹

However, while recognizing the importance of the agency market business model to the national market system, in adopting the access fee caps the Commission also was mindful that “[a]ccess fees tend to be highest when markets use them to fund substantial rebates to liquidity providers, rather than merely to compensate for execution services” and artificially high access fees (*i.e.*, those that are used primarily to fund rebates) can undermine price discovery because “the published quotations of such markets would not reliably indicate the true price that is actually available to investors or that would be realized by liquidity providers.”⁴³²

Further, notwithstanding commenters’ statements to the contrary,

⁴²⁸ Choe Letter II at 2 and 8. *See also* Angel Letter at 7.

⁴²⁹ *See* Angel Letter at 7.

⁴³⁰ *See* Regulation NMS Adopting Release, *supra* note 4, at 37544–45 (stating the Commission considered market participants’ views stating that agency markets must be allowed to charge access fees for their services, as well as those that stated that access fees distort quotation prices and should be banned. In adopting the 30 mil access fee cap, the Commission recognized that “agency trading centers perform valuable agency services in bringing buyers and sellers together, and that their business model historically has relied, at least in part, on charging fees for execution of orders against their displayed quotations.” The Commission concluded that “prohibiting access fees entirely would unduly harm this business model.”) *See infra* sections VII.C.2.b and VII.D.2.b.

⁴³¹ *Id.* *See also infra* section IV.D.1.c.

⁴³² *See* Regulation NMS Adopting Release, *supra* note 4, at 37545.

the access fee caps continue to be necessary in order to support the objectives of fair and efficient access to protected quotations, which “is necessary to support the integrity of the price protection requirement established by the adopted the Order Protection Rule.”⁴³³ In adopting Rule 611, the Commission stated that strong intermarket price protection offers greater assurance that investors who submit market orders will receive the best readily available prices for their trades.⁴³⁴ Rule 611 was designed to “strengthen the protection of displayed and automatically accessible quotations in NMS stocks.”⁴³⁵ The Commission recognized that such objectives could be undermined if “outlier” markets could charge high fees to market participants who would be required to pay such high fees to access a protected quotation because of Rule 611. The comments that suggest eliminating the access fee caps and allowing a consideration by brokers of all-in costs or relying solely on competition, do not address the concern that led to the adoption of the access fee caps, namely that outlier markets would take advantage of Rule 611 by imposing high fees for access.⁴³⁶ The access fee caps remain necessary for the reasons they were adopted.

Some commenters stated that the Commission should act to prohibit rebates.⁴³⁷ While in many cases rebates

⁴³³ *See* Regulation NMS Adopting Release, *supra* note 4, at 37502–37503 (stating “protecting the best displayed prices against trade-throughs would be futile if broker-dealers and trading centers were unable to access those prices fairly and efficiently.”) *See also* IEX Letter V at 2 (stating proposal is designed to “prevent high fees from undermining Regulation NMS’s price protection privileges afforded to exchanges”).

⁴³⁴ *See* Regulation NMS Adopting Release, *supra* note 4, at 37501.

⁴³⁵ *See* Regulation NMS Adopting Release, *supra* note 4, at 37501.

⁴³⁶ *See supra* note 355 and accompanying text.

⁴³⁷ *See, e.g.*, Steven Tripani, dated Mar. 28, 2023; Michael Dudek, dated Mar. 31, 2023 at 4; Betty Waters Letter dated Mar. 31, 2023. One commenter suggested that the Commission should prohibit or restrict the use of CADV-tiers. We the Investors Letter, dated Mar. 30, 2023 at 7. As discussed below, the Commission is adopting Rule 610(d) as proposed which will enhance the transparency of fees and rebates, including fees that may be tiered. The Commission notes that it continues to assess volume-based exchange transaction pricing. *See* Securities Exchange Act Release No. 98766 (Oct. 18, 2023), 88 FR 76282 (Nov. 6, 2023) (proposing new rule 6b-1 under the Exchange Act, which would prohibit exchanges from offering volume-based transaction pricing in connection with the execution of agency or riskless principal orders in NMS stocks) (“Fee Tiers Proposal”). As discussed below, Rule 610(d) will provide certainty regarding the amount of the fee to be assessed and the rebate to paid at the time of the time of the trade, which is separate and distinct from the Commission’s consideration of other regulatory action regarding volume-based transaction pricing. *See infra* section IV.E.

⁴²³ *See, e.g.*, IEX Letter IV at 5; Brandes Letter at 3; Citigroup Letter at 5; BlackRock Letter at 10–11; DOJ Letter at 5; Harris Letter at 1; BMO Letter at 4.

⁴²⁴ IEX Letter IV at 5. *See also* IEX Letter III at 5.

⁴²⁵ Brandes Letter at 3.

⁴²⁶ *See, e.g.*, Tripani Letter, dated Mar. 28, 2023; Francisco Gil, dated Mar. 28, 2023; We The Investors Letter dated Mar. 30, 2023 at 7; Adam Abreu, dated Apr. 30, 2023 at 2; Michael Dudek, dated Mar. 31, 2023 at 4; Larry Douglas, dated Apr. 1, 2023 at 1 and 3; We The Investors Letter I dated Mar. 15, 2023; Betty Waters Letter, dated Mar. 31, 2023; Harris Letter at 1 & 4.

⁴²⁷ *See* Choe Letter II at 2 and 8; Angel Letter at 7.

are funded by the access fees that are collected, Rule 610(c) does not apply to rebates.⁴³⁸ The Commission is adopting amendments to Rule 610(c) to reduce the access fee caps for the reasons discussed herein, but is not expanding its application to apply to rebates or to eliminate them.⁴³⁹ The adopted amendments to Rule 610(c) maintain fidelity to the original objectives of the rule, but recalibrate the fee cap amounts to reflect current market structure. As a practical matter, however, the reduced access fee caps in amended Rule 610(c) will likely reduce the rebates paid⁴⁴⁰ and, as a result, the amended access fee caps will reduce the distortions created by the existing fee structures that use access fees as a means to fund the payment of rebates in the market.⁴⁴¹

One commenter stated that the Commission should require the exchanges to “revert to traditional fees imposed on buyers or sellers or both without regard to the maker-taker status.”⁴⁴² Rule 610(c) does not require any particular fee structure, like a flat fee structure suggested by a commenter.⁴⁴³ Instead, the access fee caps set an upper limit on the amount of fees that can be charged for access to protected quotations. Within this construct, trading centers can continue to develop fee structures that are consistent with Rule 610 as well as any other regulatory requirements that may be relevant to a particular trading center.⁴⁴⁴

a. Access Fees and Minimum Pricing Increments

Several commenters stated the Commission should lower the access fee caps regardless of whether any changes are made to the minimum pricing increments and stated that such changes are warranted even if the Commission elects not to proceed with the proposed tick changes.⁴⁴⁵ One commenter stated “the current harms associated with the \$0.003 access fee cap and maker-taker pricing models exist at the current tick

sizes. Accordingly, the Commission should consider reducing the access fee cap even if it ultimately decides not to proceed with the proposed tick size changes.”⁴⁴⁶ Another commenter, however, “strongly disagreeing” with commenters’ suggestion that regulatory reform of exchange fees could proceed independently, stated that “[c]alls for regulatory mandated reductions in exchange access fee caps fail to recognize that exchange access fee caps were adopted and justified to facilitate effective intermarket linkages.”⁴⁴⁷

Other commenters stated that the levels of the access fee caps and the minimum pricing increments are connected.⁴⁴⁸ One commenter stated “[a] reduction in the minimum tick size without reducing access fees could permit fees to become a higher percentage of the minimum pricing increment, which would almost certainly undermine price transparency.”⁴⁴⁹ Commenters stated that the access fee caps should be reduced to help ensure that access fees do not become an outsized portion of displayed quotes in light of proposed changes to the minimum pricing increments.⁴⁵⁰ One commenter stated that it was “recommend[ing] keeping fees strictly less than ½ of the tick size” in order to prevent “price instability and quote flickering” and stated “[i]f fees reach ½ the tick size, it means that the same effective price point can be achieved multiple ways on an all-in basis with different nominal prices (e.g., an offer at 10.000 with a \$0.0005 rebate, or a bid of 10.001 with a \$0.0005 rebate).”⁴⁵¹ Another commenter stated “if the access fee cap were to exceed half of the tick size, the paper trail can be not only confusing but can literally misrank trades.”⁴⁵²

As recognized by several commenters, access fees and tick sizes are related in certain instances.⁴⁵³ Specifically, an access fee that is too high when compared to the tick size can create

pricing distortions.⁴⁵⁴ Therefore, because the Commission is reducing the minimum pricing increments for certain NMS stocks as set forth in Rule 612, the Commission is also reducing the Rule 610(c) access fee caps to prevent introducing pricing distortions that can occur if an access fee is greater than one-half of the tick. Maintaining an access fee cap that is less than one-half of the tick size will preserve coherence⁴⁵⁵ and result in lower transaction costs for investors.⁴⁵⁶

Further, lowering the access fee cap to 10 mils for those NMS stocks assigned a lower tick will address the distortionary effect on price transparency that would result absent adjustment to the access fee cap.⁴⁵⁷ To illustrate, if the access fee cap remained at \$0.003, which would fund rebates at a similar level, and the tick size was adjusted to \$0.005, the effect on the price of a stock could be as follows. An executed trade could be displayed at a price of \$10.005 followed by another executed trade at a price of \$10.010. Many investors would interpret this as a sign that a stock was increasing in value. However, with an access fee of \$0.003, the net price of the first order if it represents a market order to buy would be \$10.008 (the buyer pays \$10.005 and pays \$0.003 in fees), whereas the net price of the second order if it is a market order to sell would be \$10.007 (the seller receives \$10.010 and pays \$0.003 in fees). In this example, the price has fallen, not risen. Lowering the access fee cap to 10 mils will mitigate this problem.⁴⁵⁸

The Commission also agrees that the access fee caps should be lowered for all NMS stocks regardless of whether a stock is assigned the lower pricing increment of \$0.005 or retains a \$0.01 minimum pricing increment to address market distortions attributable to the fee structures that have developed under the access fee caps and align the fee caps with current market dynamics. The Commission is reducing the access fee caps for all NMS stocks and maintaining the structure that was originally adopted, *i.e.*, assigning an access fee cap based on the price of the protected quotation. And, as discussed above, maintaining a uniform access fee cap structure will help to ensure that the requirements under Rule 610(c) do not increase the fee structure complexity.

Some commenters were generally supportive of an access fee cap

⁴³⁸ See *supra* section IV.B.2. See also *infra* section IV.D.1.b.

⁴³⁹ See *infra* note 590 and accompanying text.

⁴⁴⁰ See *infra* section VII.C.2.

⁴⁴¹ See *infra* section IV.D.1.b and VII.D.2.

⁴⁴² See Harris Letter at 1 and 4.

⁴⁴³ See Harris Letter at 4.

⁴⁴⁴ National securities exchanges establish and amend their fee schedules by filing proposed fee rule changes, pursuant to section 19(b) of the Exchange Act and rule 19b-4 thereunder, for Commission review. See 15 U.S.C. 78f(b)(4) and (5) (requiring the rules of the exchange provide for the equitable allocation of reasonable dues, fees, and other charges among members, and issuers and other persons using its facilities and not be designed to permit unfair discrimination).

⁴⁴⁵ See, e.g., Healthy Markets Letter I at 24; Vanguard Letter at 6. See also *supra* note 422.

⁴⁴⁶ See Vanguard Letter at 6.

⁴⁴⁷ Choe Letter III at 1–2.

⁴⁴⁸ See, e.g., SIFMA Letter II at 39 (stating “the Commission appropriately recognized that tick sizes and access fees are linked with each other”); Nasdaq Letter I at 19 (“support[ing] adjusting the access fee cap to accommodate new tick sizes”); Better Markets Letter II at 3–4; MEMX Letter at 22 (“access fees and tick sizes are inherently linked”).

⁴⁴⁹ Better Markets Letter II at 3–4.

⁴⁵⁰ See, e.g., Invesco Letter at 4; NASAA Letter at 9; JPMorgan Letter at 6; Better Markets Letter II at 4; Healthy Markets Letter I at 22; Pragma Letter at 7; Budish Letter at 6; AIMA Letter at 4.

⁴⁵¹ Pragma Letter at 7.

⁴⁵² Budish Letter at 6.

⁴⁵³ See, e.g., MEMX Letter at 22; SIFMA Letter II at 39; Better Markets Letter II at 3–4; Nasdaq Letter I at 19. See also *infra* section VII.D.2.

⁴⁵⁴ See *infra* section VII.D.2.a.

⁴⁵⁵ See *infra* section VII.D.2.a.

⁴⁵⁶ See *id.*

⁴⁵⁷ See *id.*

⁴⁵⁸ See *id.*

reduction because of the changes to the minimum pricing increment, but offered no or few specifics as to the amount or percentage of the reduction.⁴⁵⁹ Other commenters urged the Commission to reduce the access fee caps in a manner that is proportionate to any reduction in the tick (e.g., for a \$0.005 tick, the access fee cap should be 15 mils).⁴⁶⁰

Some commenters stated that the access fee caps should be 30% of the minimum pricing increment in order to remain consistent with the percentage level under the preexisting rule.⁴⁶¹ These commenters recommended maintaining the current 30% ratio between tick size and access fee cap because they were primarily concerned that the proposal would result in access fees that were 50% of the tick (an increase in fee to tick ratio) for the smallest proposed tick size (i.e., the proposed \$0.001 tick would have been assigned a 5 mils access fee cap). Other commenters expressed concern regarding application of a two-tiered access fee cap structure to a four-tiered reduction in minimum pricing increments.⁴⁶² These commenters' concerns regarding both the increase in fee to tick ratio and asymmetrical structure of the proposal, however, have been obviated because the Commission is neither adopting the \$0.001 tick, nor the corresponding 5 mils cap.

Other commenters stated that the access fee caps should be reduced only for NMS stocks that are assigned a smaller minimum pricing increment and only in proportion to the amount of a stated corresponding decrease in the tick size, i.e., NMS stocks that were assigned a smaller \$0.005 tick size would be subject to a 15 mils access fee cap.⁴⁶³ Similarly, several exchange groups commented on the proposal and offered alternative approaches to modify Rule 610(c) to reflect the change in minimum pricing increments.⁴⁶⁴ One exchange group commenter supported the need to adjust the access fee caps to accommodate the proposed new tick sizes, but stated its view that the

proposal went "far beyond what is needed" to achieve that purpose "to the detriment of market quality and the NBBO" because reducing the caps would implicitly reduce rebates, which would impede exchanges' ability to attract liquidity and encourage tighter spreads.⁴⁶⁵ As an alternative to the proposal, the commenter recommended the Commission adopt a fee cap of 15 mils for NMS stocks assigned to a \$0.005 minimum pricing increment and retain the preexisting 30 mils access fee cap for NMS stocks that retain the \$0.01 minimum pricing increment.⁴⁶⁶ According to this commenter, this alternative "would cut access fees by half for securities in the \$0.005 tick bucket, while preserving room for exchanges to continue [to] offer rebates that are needed to bolster market quality and the NBBO."⁴⁶⁷ This commenter further stated that although the Commission intends the proposal to help the exchanges compete for retail order flow by reducing the cost for broker-dealers to access liquidity on the exchange, compressing the access fee caps would make it more expensive to provide liquidity to the exchanges and thus any benefit would be undermined.⁴⁶⁸

Several commenters stated that there should be a uniform fee cap to "avoid any additional market complexity."⁴⁶⁹ Some commenters stated that the proposed tiered access fee caps and the proposed variable minimum pricing increments would add unnecessary complexity.⁴⁷⁰ One commenter stated that it "strongly favor[ed] a single, consistent standard, rather than multiple caps tied to different ticks, which would create unnecessary complexity."⁴⁷¹ Another commenter stated that applying a uniform cap across all NMS stocks would help to address market distortions such as routing conflicts arising from the maker-taker fee model.⁴⁷² Another commenter stated that continuing to apply a uniform cap will more effectively achieve the objectives of Rule 610 because absent such adjustment, "the ability of exchanges to abuse their status as protected markets will be no less for

stocks that are assigned a higher tick increment."⁴⁷³ One commenter stated that setting different fee caps based on tick size would "allow exchanges to impose a 'penalty fee' for participants looking to access quotes in stocks that are less actively traded" and further stated that "there is no justification in logic or regulatory purpose to make that distinction."⁴⁷⁴ However, other commenters disfavored a "one-size-fits-all" model.⁴⁷⁵ One commenter suggested the Commission consider a "dynamic tick size approach with the access fee cap proportionally tied to both smaller and larger tick sizes"⁴⁷⁶ and recommended the access fee caps be a certain percentage of the minimum pricing increment, but did not propose a particular percentage that should be adopted.⁴⁷⁷

Other commenters disagreed that the level of the access fee cap should be tied to the pricing increment assigned. One exchange commenter stated that the "original justification for access fee caps had nothing to do with tick sizes" and instead "centered around ensuring that transaction fees did not unduly distort the price of a quote that the Commission was protecting by rule [611]."⁴⁷⁸ This commenter also stated that "[m]odifications to access fee caps should only be discussed in the context under which they were conceived" which was "to ensure that market centers displaying the best price did not impose access fees that compromised the value of the better price."⁴⁷⁹

The Commission agrees that one of the purposes of the access fee cap was, and remains, to help to ensure that transaction fees do not unduly distort the price of protected quotations. However, the Commission does not agree that goal is best achieved by adopting certain commenters' recommendation to reduce the access fee caps proportionally (i.e., to 15 mils) and only for those NMS stocks that are assigned a smaller minimum pricing increment. A proportional reduction for a limited universe of NMS stocks would allow higher access fees and rebates along with related market distortions to continue for the NMS stocks that retain the \$0.01 increment and would perpetuate unwarranted complexity (e.g., complex orders types, market

⁴⁵⁹ See, e.g., AIMA Letter at 4; Cambridge Letter at 6; ICI Letter I at 16; STA Letter at 8.

⁴⁶⁰ See, e.g., Pragma Letter at 7; MFA Letter at 13; Schwab Letter II at 6 and 36; SIFMA Letter II at 45; MEMX Letter at 22; Jefferies Letter at 2; NYSE Letter I at 7; Nasdaq Letter I at 29; NYSE, Schwab, and Citadel Letter at 1–2.

⁴⁶¹ See, e.g., FIA PTG Letter II at 3; Hudson River Letter at 4; MMI Letter at 7; Robinhood Letter at 46, 56–59. See also MEMX at 22.

⁴⁶² See, e.g., JPMorgan Letter at 6; MFA Letter at 13.

⁴⁶³ See, e.g., Fidelity Letter at 14–15; Cambridge Letter at 6; NYSE, Schwab, and Citadel Letter at 2; MEMX Letter at 23; Jefferies Letter at 2; Schwab Letter II at 6.

⁴⁶⁴ See Nasdaq Letters I and II; NYSE Letter I; and Cboe Letters I–IV.

⁴⁶⁵ Nasdaq Letter I at 2 and 19.

⁴⁶⁶ Nasdaq Letter I at 2, 19 and 29. See also NYSE Letter I at 7.

⁴⁶⁷ Nasdaq Letter I at 2.

⁴⁶⁸ Nasdaq Letter I at 20.

⁴⁶⁹ Better Markets Letter I at 16. See also e.g., Better Markets Letter II at 4; Brandes Letter at 3; BlackRock Letter at 11; JPMorgan Letter at 6; Invesco Letter at 4.

⁴⁷⁰ See, e.g., JPMorgan Letter at 6; Brandes Letter at 3.

⁴⁷¹ Brandes Letter at 3.

⁴⁷² Capital Group Letter at 4.

⁴⁷³ See, e.g., IEX Letter VI at 2.

⁴⁷⁴ IEX Letter VI at 2.

⁴⁷⁵ See, e.g., T. Rowe Price Letter at 4; BlackRock Letter at 10–11; Citigroup Letter at 5–6; Letter from Phil Mackintosh, Nasdaq, Inc., dated May 7, 2024, at 2 ("Nasdaq Letter V").

⁴⁷⁶ Morgan Stanley Letter at 3.

⁴⁷⁷ Morgan Stanley Letter at 3–4.

⁴⁷⁸ See Cboe Letter IV at 2.

⁴⁷⁹ See Cboe Letter IV at 2.

fragmentation, complex fee and rebate schedules and frequent changes to complex order routing strategies to adjust to fee changes) to the current market structure.⁴⁸⁰ Applying a uniform 10 mil access fee cap to access protected quotations in all NMS stocks priced \$1.00 or greater will avoid injecting complexity⁴⁸¹ in the market and will continue to guard against “outlier” markets undermining the objectives of Rule 611.

While the Commission agrees with commenters that tick size and access fees are relational in so far as the access fee cannot be more than half of the minimum pricing increment (for the reasons discussed above), maintaining the current proportionality of the access fee to tick could perpetuate distortions in the market. As stated by one commenter, “when the cap was set in 2005, neither the Commission nor commenters ever suggested that the cap should be exactly equal to a fixed proportion of the tick size.”⁴⁸²

Further, lowering the access fee cap for only those NMS stocks that are assigned a lower minimum pricing increment (*i.e.*, those NMS stocks that are constrained by the \$0.01 minimum pricing increment) and maintaining the preexisting (30 mils) fee cap for all other NMS stocks priced \$1.00 or greater could increase the probability that some stocks will oscillate from one tick size to another rather than settling on an appropriate tick. This oscillation creates additional cost for market participants, introduces complexity in the markets and creates operational risk.⁴⁸³ In addition, continuing to apply a 30 mil access fee cap to those NMS stocks that continue to be assigned a \$0.01 pricing increment would ignore the efficiencies in trading⁴⁸⁴ that have been realized in the intervening 19 years since the caps were adopted and would not address the distortive effects of access fee structures that assess access fees at or near the current cap in order to maximize the amount of the rebate that can be offered.⁴⁸⁵

In addition, as discussed below, and supported by some commenters, fees and rebates which are currently benchmarked against the 30 mil cap have a negative impact on price

transparency and routing practices.⁴⁸⁶ According to one commenter, “there is evidence that exchanges that pay the highest rebates often provide worse execution quality.”⁴⁸⁷ Another commenter provided data it said demonstrates that “poor execution quality is directly linked to high access fees.”⁴⁸⁸

Lowering the cap to 10 mils for all NMS stocks, both those that are assigned a \$0.005 tick and those that retain the \$0.01 tick, will benefit market participants, including investors, by lessening the incentives to route to a market in order to receive a rebate.

The Commission proposed a two-level access fee cap structure for access to protected quotes in NMS stocks priced at \$1.00 or more to accommodate the proposed variable minimum pricing increment structure and specifically to prevent the access fee caps from creating pricing distortions with the smallest proposed minimum pricing increment (*i.e.*, 5 mils access fee cap for NMS stocks that would have been assigned a \$0.001 pricing increment and 10 mils cap for NMS stocks that would have been assigned a pricing increment greater than \$0.001).⁴⁸⁹ Specifically, the proposed 5 mil access fee cap was necessary to accommodate the proposed lowest \$0.001 minimum pricing increment because imposing the proposed 10 mil access fee cap on the \$0.001 minimum pricing increment would have created distortions in quoting and negatively impact pricing transparency.⁴⁹⁰

Several commenters raised concerns about the proposed 5 mil access fee cap and its ratio as compared to the minimum pricing increment.⁴⁹¹ One commenter stated that “[a]t 50% of the minimum pricing increment, a round

trip buy and sell trade could result in access fees equal to the spread” and expressing concern that “at 50% of the spread, rebates of greater than half of the minimum pricing increment could lead to market distortion.”⁴⁹² Because the amendment to Rule 612 does not include the \$0.001 minimum pricing increment, the Commission is not adopting the 5 mils access fee cap. Specifically, with the elimination of the proposed \$0.001 minimum pricing increment,⁴⁹³ the proposed 5 mil access fee cap is unnecessary.⁴⁹⁴ Accordingly, the Commission is adopting the proposed 10 mils access fee cap as proposed.⁴⁹⁵ The Commission is removing the proposed tiered approach to the access fee caps and instead maintaining the preexisting single, uniform access fee cap structure for protected quotes priced \$1.00 or more.⁴⁹⁶ The amendment will introduce fewer variables, less complexity and lower cost and operational risk as compared to the proposed two-level access fee cap structure.⁴⁹⁷ More specifically, as is the case today, there will be one access fee cap for NMS stocks priced at \$1.00 or more and a separate access fee cap that applies to NMS stocks priced below \$1.00.

b. Impact on Liquidity and the NBBO

Some commenters stated that lowering the access fee cap to 10 mils would not impinge on the exchanges’ ability to offer incentives and attract liquidity and instead stated that reducing the caps would likely draw liquidity back to the exchanges.⁴⁹⁸ According to one commenter, “ATSS and other off-exchange venues generally charge rates much lower than the access

⁴⁹² Hudson River Letter at 4.

⁴⁹³ See *supra* section III.C and *supra* note 346.

⁴⁹⁴ This approach is consistent with some commenters’ recommendations. See, e.g., Better Markets Letter I at 16 (stating “the Commission should just dispense with the \$0.001 tick size altogether” because doing so would eliminate “the need for a separate [5 mil] access fee cap.” This commenter stated that proceeding in this manner would maintain a single uniform cap for all stocks and avoid introducing additional complexity).

⁴⁹⁵ See *supra* note 346.

⁴⁹⁶ Several commenters expressed support for expanding the application of the access fee caps in certain ways. See, e.g., *infra* notes 614–616. Expanding or altering the structure of the cap would add complexity to the national market system. As discussed above, in response to commenters, amended Rule 610(c) introduces fewer variables and less complexity into the national market system. Expanding the application of Rule 610(c) and/or modifying its structure as these commenters suggest would be inconsistent with this approach.

⁴⁹⁷ See Regulation NMS Adopting Release, *supra* note 4, at 37595.

⁴⁹⁸ See IEX Letter IV at 18–19, 22; Themis Letter at 8; Better Markets Letter I at 16; BMO Letter at 3–4; ASA Letter at 5.

⁴⁸⁰ See *infra* section VII.D.2.

⁴⁸¹ See *infra* section VII.D.2.d.

⁴⁸² IEX Letter V at 7.

⁴⁸³ See *infra* section VII.F.2.a.

⁴⁸⁴ See *supra* note 405 and accompanying text (discussing trading efficiencies due to technology changes and reduced costs), *infra* note 598, and *infra* section IV.D.1.d.

⁴⁸⁵ See *infra* section IV.D.1.d.

⁴⁸⁶ See, e.g., IEX Letter IV at 2–4; Better Markets Letter I at 16.

⁴⁸⁷ Better Markets Letter I at 16. See also IEX Letter VI at 7; NASAA at 9.

⁴⁸⁸ IEX Letter VI at 7.

⁴⁸⁹ See Proposing Release, *supra* note 11, at 80348 (stating “the access fee cap should not be greater than ½ of the tick size in order to preserve coherence between net and nominal price rankings of trading venues. This would not be possible with an access fee cap of \$0.001 and a lowest possible proposed tick size of the same amount, as would be the case for the smallest tick size tier from the proposal.”).

⁴⁹⁰ See Proposing Release, *supra* note 11, at 80267 & 80289–90 (stating “[a] reduction in the minimum pricing increment without reducing the access fee caps could permit fees to become a higher percentage of the minimum pricing increment, which could potentially undermine price transparency and exacerbate the other concerns with maker-taker fees.”).

⁴⁹¹ See, e.g., Schwab Letter II at 6 and 36; SIFMA Letter II at 45; Citadel Letter I at 23; Hudson River Letter at 4; AIMA Letter at 4; Robinhood Letter at 57–58.

fees imposed by most exchanges. Because their cost of access is so much higher than on other venues, exchanges become the venue of ‘last resort.’”⁴⁹⁹ This commenter further stated that “modernizing the access fee cap and bringing exchange access fees in line with off-exchange trading venues will reduce the need for exchange avoidance and naturally result in a better experience for liquidity providers, one that will not need to be ‘offset’ by rebate payments.”⁵⁰⁰ Another commenter stated that “[b]rokers’ avoidance of these fees is a significant contributor for brokers often choosing to internalize or first route to ATSs or OTC market makers, rather than to exchanges with their customers’ orders.”⁵⁰¹ Another commenter stated that “the 30-mil cap is among the factors driving the shift away from displayed trading.”⁵⁰² One commenter stated “reduced displayed trading is a problem because it impedes the fair and transparent distribution of pricing and transaction information that Congress directed the Commission to protect . . . [and] the 30-mil cap is among the factors driving the shift away from displayed trading.”⁵⁰³ And another commenter stated that lower access fees will impose lower costs on investors, “removing a disincentive for trading on exchanges.”⁵⁰⁴

Other commenters stated that lowering the access fee caps would address other concerns regarding market distortions associated with the payment of high rebates.⁵⁰⁵ One commenter stated that “[r]ebates distort supply and demand and harm the price discovery process.”⁵⁰⁶ One commenter stated that reducing the cap to 10 mils would “provide ample room for exchanges to create incentives, charge premium or discounted prices, and earn a profit, all while lowering the distortive effects they have on the equity market.”⁵⁰⁷ In addition, some commenters stated that reducing the cap would alleviate the potentially distortive effects of the maker-taker pricing model.⁵⁰⁸

According to one commenter, “the current fee levels foster and enable significant market distortions in today’s marketplace” and “the fees charged by exchanges often serve as powerful disincentives for market participants to access that liquidity.”⁵⁰⁹ Another commenter “recognize[d] that access fees and the rebates that they fund serve an important function in incentivizing liquidity provision for thinly-traded securities and compensating market makers for adverse selection,” but also stated that “[p]rudent regulation must appropriately . . . balance the beneficial effect of access fees on liquidity against the potential for market distortions” associated with maintaining the 30 mil cap.⁵¹⁰ According to this commenter, “lowering fees would mitigate the detrimental effect of access fees on order routing, price transparency, and market quality in many securities.”⁵¹¹ Further, another commenter stated that when the Commission adopted the preexisting caps, “its focus was on limiting the distortive impact of disproportionate access fees, not on facilitating the ability of markets to pass them through as rebates.” According to this commenter, the only way in which the Commission viewed access fees and rebates as related was that “a fee limit was needed to avoid distortive pricing of the type that occurs when access fees are primarily passed through to other participants in the form of rebates.”⁵¹² This commenter further stated that the “bulk of executions against displayed quotes pay the maximum fee, with the overwhelming share of that revenue being passed through as rebates.”⁵¹³

Finally, one commenter stated “the pricing distortions the Commission was concerned about when it adopted Regulation NMS have become acute today due to changed market conditions” resulting in brokers being incentivized to “route orders away from best-displayed exchange quotes in order to avoid the high fees—precisely the result the Commission sought to avoid when it first adopted the cap.”⁵¹⁴ This commenter also stated that “the introduction of ‘inverted’ venues that pay rebates to access rather than provide displayed orders, and the use of highly-skewed rebate tiers, has created even

more price distortion and misaligned incentives.”⁵¹⁵

Other commenters opposed any changes to the existing access fee caps because they stated that reducing the caps would limit the exchanges’ ability to offer rebates to incentivize liquidity providers, as access fees typically fund such rebates and this could negatively impact liquidity on exchange markets.⁵¹⁶ Some commenters stated that the reduction in the access fee caps, which would reduce rebates, would result in wider spreads, and less quoted size which would increase trading costs.⁵¹⁷ One commenter stated that the “cost of widening spreads that would result from removing fees and rebates would cost retail investors . . . as much as \$687 million per year.”⁵¹⁸ Some commenters stated that the reduction of rebates would impact spreads, which (according to those commenters) suggests that rebates have an impact on displayed pricing.⁵¹⁹ Other commenters stated that the reduction in rebates would have a negative impact on market liquidity.⁵²⁰ One commenter stated that the current access fee cap levels “help[] improve liquidity and provide narrower quotes than otherwise would be available in the marketplace.”⁵²¹ Similarly, another commenter stated support for further “examining changes to the access fee cap,” but cautioned “that wholesale reductions, particularly when combined with other changes . . . will disincentivize liquidity provision, reduce market maker support, widen bid-ask spreads, and increase volatility in thinly-traded securities.”⁵²² Some commenters stated that certain securities may “require rebates larger than 10 mils to incentivize tight quotes.”⁵²³ However, another commenter stated that claims of “hidden costs to investors, in the form of worse NBBO prices, wider spreads, higher costs for retail investors, in the

⁴⁹⁹ IEX Letter IV at 5.

⁵⁰⁰ See, e.g., World Federation of Exchanges Letter at 4; Virtu Letter II at 8, 16–17; Citadel Letter I at 22.

⁵⁰¹ See, e.g., State Street Letter at 4, Interactive Brokers Letter at 5, Nasdaq Letter I at 23, Nasdaq Letter II at 5–6, Letter from Brett Kitt, Associate Vice President, Principal Associate General Counsel, Nasdaq, Inc., dated Feb. 14, 2024 (“Nasdaq Letter III”) at 5, Cboe Letter III at 8.

⁵⁰² Nasdaq Letter III at 5.

⁵⁰³ See, e.g., Cboe Letter II at 8–9; Cboe Letter III at 8; Nasdaq Letter I at 2; Nasdaq Letter I at 22.

⁵⁰⁴ See, e.g., CCMR Letter at 27, Interactive Brokers Letter at 5.

⁵⁰⁵ Fidelity Letter at 14.

⁵⁰⁶ State Street Letter at 4. See also CCMR Letter at 27; Interactive Brokers Letter at 5; Nasdaq Letter I at 23; Nasdaq Letter II at 5–6; Nasdaq Letter III at 5.

⁵⁰⁷ Fidelity Letter at 14. See also e.g., Nasdaq Letter II at 6; State Street Letter at 4.

⁴⁹⁹ IEX Letter IV at 18.

⁵⁰⁰ IEX Letter IV at 18–19.

⁵⁰¹ Healthy Markets Letter I at 21.

⁵⁰² IEX Letter IV at 6. See also ASA Letter at 5.

⁵⁰³ IEX Letter IV at 6.

⁵⁰⁴ Better Markets Letter I at 16. See also IEX Letter VI at 1.

⁵⁰⁵ See IEX Letter IV at 10–11, 16; Themis Letter at 7.

⁵⁰⁶ Themis Letter at 7. See also IEX Letter IV at 16; Verret Letter III at 11, 13–14.

⁵⁰⁷ BMO Letter at 4. See also Tripari Letter; Verret Letter III at 13; Proposing Release, *supra* note 11, at 304.

⁵⁰⁸ See, e.g., BMO Letter at 4; Brandes Letter at 3; Healthy Markets Letter I at 21; Themis Letter at 7; Council of Institutional Investors Letter at 3. See

also *infra* section VII.D.2 (discussing market distortions).

⁵⁰⁹ Healthy Markets Letter I at 21.

⁵¹⁰ BlackRock Letter at 10–11.

⁵¹¹ *Id.* at 10.

⁵¹² IEX Letter IV at 5.

⁵¹³ *Id.*

⁵¹⁴ IEX Letter IV at 5.

form of worse NBBO prices, wider spreads, higher costs for retail investors and less liquidity for thinly-traded securities” did not have a factual basis and did not account for the “tangible cost reductions that would arise from lower access fees.”⁵²⁴

Certain exchanges also opposed any changes to the access fee caps, stating that reducing the access fee caps would impede their ability to offer competitive rebates and meaningful price differentiation, hindering their ability to attract liquidity and compete with off-exchange trading venues for order flow.⁵²⁵ One commenter stated that “[c]ompressing the caps further . . . [would] introduce additional concerns with implications for competition and market quality.”⁵²⁶ In addition, this commenter stated that rebates, which are funded by access fees, are “innovative and critically important tools that enhance market depth, promote tighter bid-ask spreads, and encourage order flow to be routed to lit exchanges” and any diminution in the access fee caps would “in fact disrupt current business practices and competitive dynamics.”⁵²⁷ This commenter also stated that reducing the access fee caps could “have significant revenue consequences,”⁵²⁸ but provided no specifics. Another commenter stated that reducing rebates “discourages on-exchange market making,” which could deteriorate the NBBO as it “would be drawn from a smaller and less representative pool of displayed liquidity.”⁵²⁹ According to this commenter, although the proposal might make it cheaper for broker-dealers to access liquidity, costs for liquidity providers and market makers would increase, and spreads would widen, which in turn would result in higher “all-in” costs for investors.⁵³⁰ Further, one commenter stated that the proposal “risks weakening the NBBO by restricting exchanges’ ability to offer meaningful rebates to encourage more liquidity and tighter spreads that

underpin the NBBO”⁵³¹ and stated that the NBBO is “comprised exclusively of trading interest displayed on public exchanges. . . . [and] limit[ing] exchanges’ ability to gather liquidity . . . would weaken the public reference price.”⁵³² According to this commenter, “rebates are essential to market quality as they encourage market participants to act as market makers and provide two-sided quotes that make the equity markets function soundly.”⁵³³ This commenter further stated that rebates provide “integral value to the operation of well-functioning, fair, and orderly equity markets” because they serve to cushion market makers against the risks of adverse selection and price volatility, thereby incentivizing them to continue to make markets, even in thinly-traded or volatile securities, and to do so with tighter spreads than they would otherwise.”⁵³⁴ According to the same commenter, a reduction in rebates would lead to greater market complexities because there would be more “speedbump or ‘quote protection’ markets” and a “[g]reater focus on segmentation.”⁵³⁵ This commenter also stated that the proposal would “potentially undermine the competitive positions of the exchanges and the market makers that quote on them by seeking to limit their ability to charge fees and collect rebates for their respective services.”⁵³⁶ Another commenter stated that “it is entirely inappropriate to experiment with *exchange* pricing models for fear of *broker* failings” and “exchange fees are extremely transparent . . . and receive a significant amount of SEC review.”⁵³⁷

Finally, one commenter “question[ed] the Commission’s authority to reduce the fee cap beyond what is needed to accommodate the new, smaller tick sizes, thereby with the implicit aim of limiting the ability of exchanges to provide meaningful rebates to market participants.”⁵³⁸ According to this commenter, the Commission “lacks the authority to enact radical changes to exchange access fees without explicit congressional mandate” and “the Commission’s charge to establish a national market system evidences no express intent for the Commission to impose price controls upon exchanges

as a means of promoting competition.”⁵³⁹

Other commenters stated that the Commission had clear statutory authority to adopt Rule 610 and to make subsequent adjustments to the access fee caps.⁵⁴⁰ One commenter stated that “a plethora of items in the 34 Act, the SEC’s prior 50 years of regulation of the National Market System, and related constitutional precedent regarding the private non-delegation doctrine specific to self-regulatory organizations (SROs)—not only give the SEC sufficient delegation of authority to adopt the pending NMS proposal, they compel the SEC to exercise its authority that oversees a dynamically changing national market system.”⁵⁴¹

As discussed above,⁵⁴² section 11A(c)(1)(B) of the Exchange Act authorizes the Commission to adopt rules assuring the fairness and usefulness of quotation information.⁵⁴³ Further, Congress explicitly granted the Commission “broad authority to oversee the implementation, operation, and regulation of the national market system” and the “clear responsibility to assure that the system develops and operates in accordance with Congressionally determined goals and objectives” which requires balancing different, and often competing, interests and components of the complex national market system.⁵⁴⁴ The access fee caps in preexisting Rule 610(c) were adopted through rulemaking pursuant to the Exchange Act, including section 11A, and recalibration of the levels of the access fee caps falls squarely within the Commission’s statutory authority. The commenter that questioned the Commission’s authority to reduce the level of the access caps to 10 mils acknowledged the Commission’s authority to reduce the access fee caps “to accommodate the new, smaller tick sizes”⁵⁴⁵ and in an earlier comment letter stated it “supports adjusting the access fee cap to accommodate new tick sizes.”⁵⁴⁶ The Commission’s authority set forth in the Exchange Act is not circumscribed in the manner suggested

⁵²⁴ See IEX Letter IV at 22.

⁵²⁵ See Cboe Letter II at 8–9; Cboe Letter III at 8; Nasdaq Letter I at 2; Nasdaq Letter I at 22. See also e.g., Virtu Letter II at 8; Citadel Letter I at 22.

⁵²⁶ See Cboe Letter II at 8. See also Cboe Letter IV at 2; Nasdaq Letter I at 22–29; Nasdaq Letter IV at 8.

⁵²⁷ Cboe Letter III at 4. See also Cboe Letter IV at 3; Nasdaq Letter I at 20.

⁵²⁸ Cboe Letter IV at 3.

⁵²⁹ Nasdaq Letter II at 7. See also Nasdaq Letter I at 19; Nasdaq Letter III at 5–6. But see IEX Letter IV at 10–11 (stating “[t]here is ample evidence that maintaining the access fee cap at its current level has led to distortions the Commission sought to avoid.”).

⁵³⁰ Nasdaq Letter I at 20; Nasdaq Letter II at 6–7.

⁵³¹ Nasdaq Letter I at 2, 22.

⁵³² Nasdaq Letter I at 22.

⁵³³ Nasdaq Letter I at 22.

⁵³⁴ Nasdaq Letter I at 22.

⁵³⁵ Nasdaq Letter IV at 8.

⁵³⁶ Nasdaq Letter I at 21.

⁵³⁷ Cboe Letter III at 5–6.

⁵³⁸ Nasdaq Letter VI at 1.

⁵³⁹ Nasdaq Letter VI at 2.

⁵⁴⁰ See, e.g., IEX Letter IV at 3; Letter from J.W. Verret, Associate Professor, George Mason University, dated Aug. 27, 2024 (“Verret Letter IV”).

⁵⁴¹ Verret Letter IV at 2.

⁵⁴² See *supra* section IV.A. See also sections I and I.B.

⁵⁴³ 15 U.S.C. 78k–1(c)(1)(B). Section 23 of the Exchange Act also authorizes the Commission “to make such rules and regulations as may be necessary or appropriate to implement the provisions” of the Act. 15 U.S.C. 78w(a)(1).

⁵⁴⁴ See *supra* notes 2–3 and accompanying text.

⁵⁴⁵ Nasdaq Letter VI at 1 and Nasdaq Letter I at 2.

⁵⁴⁶ Nasdaq Letter I at 2.

by this commenter. Congress granted the Commission broad authority to oversee the national market system and ensure that it is meeting the investment needs of the public. The reductions in the access fee caps adopted herein are designed to improve market quality for market participants accessing protected quotations in all NMS Stocks, not just those that will be assigned a new minimum pricing increment. As discussed throughout, the adjusted level of the caps also will allow trading centers to retain their net capture for transactions of protected quotations priced \$1.00 or more and therefore trading centers who wish to use rebates to attract liquidity may continue to do so. Accordingly, the Commission has considered and balanced policy objectives in this complex area and reached an appropriate policy decision.⁵⁴⁷

Although some commenters stated that rebates are essential to attract liquidity on exchanges,⁵⁴⁸ the access fee caps were not established to support trading centers' ability to offer rebates or to ensure a particular level of rebate payment; they were developed as a means to help ensure fair, efficient, and ready access to protected quotes, to preserve the integrity of displayed prices and to ensure that the objectives of Rule 611 would not be undermined by trading centers who might seek to charge exorbitant fees to those now required to access their protected quotations.⁵⁴⁹ The Commission disagrees that rebates are essential to attract liquidity on national securities exchanges or the only means of attracting liquidity.⁵⁵⁰ The Commission stated in 2005 that markets have "significant incentives to be near the top in order-routing priority"⁵⁵¹ and displaying the best protected quotation

will attract liquidity to a market. The adopted amendments will continue to allow for trading centers to develop different fee models while also preserving the objectives of Rule 610(c). Further, market participants that post non-marketable orders are able to price their orders to accommodate the risk of adverse selection and rebates are not necessary for compensating this risk.

Reducing the access fee caps will help to alleviate the distortive effects of the preexisting level of access fees and the rebates they fund. The access fee caps were designed to protect limit orders and to assure that orders could be routed to those markets that were displaying the best-priced quotations.⁵⁵² As the Commission stated when it adopted the access fee caps, "[a]ccess fees tend to be highest when markets use them to fund substantial rebates to liquidity providers, rather than merely to compensate for execution services. If outlier markets are allowed to charge high fees and pass most of them through as rebates, the published quotations of such markets would not reliably indicate the true price that is actually available to investors or that would be realized by liquidity providers."⁵⁵³ The Commission also discussed the potential distortionary effect of high fees and rebates on displayed quotes and sought to assure that displayed prices were within a limited range of net prices.⁵⁵⁴

In the current national market system, fees for access to protected quotes are typically charged at the highest amount allowed under Rule 610(c) and the vast majority of the fees collected are paid out as rebates.⁵⁵⁵ This practice results in displayed quotations prices that are not reflective of underlying economics of liquidity supply and demand, but rather displayed quotations prices that have been calculated to account for the receipt of a rebate.⁵⁵⁶ The Commission is concerned that this structure impairs the fairness and accuracy of displayed quotations.

The access fee caps set an outer limit on the cost of accessing protected quotations to "assure[] order routers that displayed prices [are] within a limited range, true prices."⁵⁵⁷ In setting the maximum level for the access fees trading centers could charge market participants to access a protected quotation in 2005, the Commission specifically recognized that "some markets might choose to charge lower fees, thereby increasing their ranking in the preferences of order routers. . . while [o]thers might charge the full \$0.003 and rebate a substantial proportion to liquidity providers."⁵⁵⁸ The Commission left it to the markets and competition to determine what strategies would be successful in attracting order flow, subject to the maximum access fee cap.⁵⁵⁹ Without an access fee cap, the Commission was concerned that certain markets would charge high fees and pass most of them through as rebates, which would undermine price discovery and price transparency.⁵⁶⁰ The Commission's concerns when it adopted Regulation NMS, that access fees might gravitate to the highest level permitted by Rule 610 and the impact on price transparency, have been realized to the detriment of investors.⁵⁶¹

As discussed below, the reduction in the access fees will improve market quality.⁵⁶² For those NMS stocks that

⁵⁵⁷ Regulation NMS Adopting Release, *supra* note 4, at 37502. *See also* IEX Letter IV at 4 and 15 (stating "[t]he purpose [for capping access fees] is not, and has never been, to allow exchanges to maintain rebate payments at current high levels.").

⁵⁵⁸ Regulation NMS Adopting Release, *supra* note 4, at 37545 (stating that establishing the \$0.003 cap to "limit the outlier business model [and] plac[ing] all markets on a level playing field in terms of the fees they can charge and the rebates they can pass on to liquidity providers. Some markets might choose to charge lower fees, thereby increasing their ranking in the preferences of order routers. Others might charge the full \$ 0.003 and rebate a substantial proportion to liquidity providers. Competition will determine which strategy is most successful."). *See also* Proposing Release, *supra* note 11 at 80348 (stating "The Commission recognizes that an access fee cap of 10 mills for stocks . . . would provide exchanges with enough pricing freedom to continue to offer economically meaningful rebate-tiering."). One commenter stated that "diminished reliance on the maker-taker economics would encourage a variety of alternative market models for providing liquidity," which in this commenter's view would be consistent with the outcome the Commission anticipated in 2005, but which has not been realized. Decimus 2016 Letter at 11.

⁵⁵⁹ Regulation NMS Adopting Release, *supra* note 4, at 37545.

⁵⁶⁰ *Id.* *See also* Better Markets Letter II at 3 (lowering access fees would "ensure that the fees charged to access a protected quotation do not distort the true price that is available to investors.").

⁵⁶¹ *See* Proposing Release, *supra* note 11, at 80292 n.317 and accompanying text and 80290 n.302. *See also infra* section VII.A.

⁵⁶² *See infra* section VII.B.

⁵⁴⁷ *See* Regulation NMS Adopting Release, *supra* note 4, at 37498. As was the case when the Commission adopted the preexisting fee caps, the rulemaking process has required the Commission to "grapple with many difficult and contentious issues that have lingered unresolved for many years" and after examining these issues and assessing the views of commenters, particularly those that disagree with the proposal, "decisions must be made and contentious issues must be resolved so that the markets can move forward with certainty." *Id.* While the Commission always seeks to achieve a consensus, "consensus can mean indefinite gridlock that ultimately could damage the competitiveness of the U.S. equity markets []. [T]he time has come to make the difficult decisions necessary to modernize and strengthen the national market system." *Id.*

⁵⁴⁸ *See, e.g.*, Cboe Letter III at 6–7; World Federation of Exchanges Letter at 4; Virtu Letter II at 8, 16–17; Citadel Letter I at 22.

⁵⁴⁹ *See* Regulation NMS Adopting Release, *supra* note 4, at 37503.

⁵⁵⁰ *See id.* at 37596.

⁵⁵¹ *Id.*

⁵⁵² *See* Regulation NMS Adopting Release, *supra* note 4, at 37545.

⁵⁵³ *See* Regulation NMS Adopting Release, *supra* note 4, at 37545. *See also* IEX Letter V at 3 (stating "there is an obvious and direct connection between high access fees and the extent to which displayed prices deviate from the true prices at which participants are prepared to trade.").

⁵⁵⁴ *See* Regulation NMS Adopting Release, *supra* note 4, at 37502.

⁵⁵⁵ *See infra* section VII.C.2 and section VII.B.3 (stating most exchanges charge the maximum fee (in the range of 30 mills) and provide the maximum rebate (in the vicinity of 30 mills) and stating that the primary reason that access fees remain near 30 mills on most exchanges is to fund rebates) and *infra* section VII.C.2.c, table 4.

⁵⁵⁶ *See infra* section VII.B.3.

are not experiencing a constraint on the quoted spread due to the minimum pricing increment, transaction costs will remain largely unchanged under the amendments as spreads will adjust on average to offset the reduction in access fees and rebates.⁵⁶³ For those NMS stocks that do experience constraint on the quoted spread due to the preexisting minimum pricing increment, transaction costs for liquidity seekers will go down and the oversupply of liquidity will be reduced, which will allow for shorter queues and higher fill rates.⁵⁶⁴ For these NMS stocks, the access fee functions as a tax on liquidity demand.⁵⁶⁵ Reducing the access fee in these constrained stocks will result in savings for investors.⁵⁶⁶

Further, while some commenters stated that exchange volume would decline and that OTC trading would increase if the access fee caps were reduced, as discussed below,⁵⁶⁷ analysis indicates that liquidity providers would not be deterred from quoting on exchange because they will be able to widen their quote to reflect the reduced rebate, thereby receiving the same economic profit as they received with the rebate. Liquidity demanders would not be worse off because the reduction in access fee would offset, or, in the case of stocks with an economic spread of less than a tick, more than offset, the increase in spread.⁵⁶⁸

Some commenters stated that the reduced access fee caps would help to address potential conflicts of interest in routing decisions that may harm execution quality of customer orders.⁵⁶⁹ One commenter stated that “lowering the access fee cap would lead to a reduction in broker conflicts of interests.”⁵⁷⁰ Another commenter stated that the proposal “will help to reduce the extent of the conflict of interest in agency routing decisions.”⁵⁷¹ Another commenter stated “[w]e have long supported the Commission addressing the conflict faced by brokers related to incentives created by access fees and rebates in the maker/taker model” and that “a simple reduction of access fees across all venues to \$0.001

would go a long way in mitigating order routing conflicts.”⁵⁷²

Another commenter, however, stated that the Commission did not provide any new data to support its position that access fees and rebates are “actually harmful to the market” and further stated that “the Commission’s supposition that rebates present harmful conflicts-of-interest to brokers is not supported with evidence, and it ignores the countervailing benefits associated with rebates, which are essential tools for gathering the displayed quotes that form the NBBO.”⁵⁷³ Another commenter stated that “half of the rebates on Cboe accrue to non-agency market-making activity—thus, there is no real or perceived conflicts of interest” and for agency order flow, some of that flow is “‘directed’ meaning clients give specific instructions for the order to be routed to a particular venue for execution” and thus there similarly is no conflict.⁵⁷⁴ This commenter further stated, “brokers have a duty of best execution regardless of the pricing model used by the exchange.”⁵⁷⁵

The Commission disagrees with those commenters that questioned the existence of potential conflicts of interest. The Commission has received comments from market participants that have stated that potential conflicts of interest are a concern because of the fee/rebate models. Some commenters stated that fees and rebates that are currently benchmarked against the 30 mil cap have a negative impact on routing practices⁵⁷⁶ and one commenter offered evidence that “exchanges that pay the highest rebates often provide worse execution quality.”⁵⁷⁷ Another commenter provided data it said demonstrates that “poor execution quality is directly linked to high access fees.”⁵⁷⁸ Moreover, the Commission has heard similar concerns about potential conflicts of interest created by the fee and rebate schedules and their impact on market quality for many years.⁵⁷⁹

⁵⁷² Capital Group Letter at 4.

⁵⁷³ Nasdaq Letter I at 2 (stating “It would be arbitrary and capricious for the Commission to proceed with the Proposal in the absence of evidence that the current fee cap is actually harmful to the market and without meaningfully weighing the costs and benefits of those reductions.”); Nasdaq Letter III at 6 (stating the Commission “did not cite any new research conducted subsequent to the Transaction Fee Pilot to support the SEC’s change of position that access fees and rebates are actually harmful.”).

⁵⁷⁴ Cboe Letter III at 5–6.

⁵⁷⁵ Cboe Letter III at 5–6.

⁵⁷⁶ See, e.g., IEX Letter IV at 2; Better Markets Letter I at 16.

⁵⁷⁷ Better Markets Letter I at 16.

⁵⁷⁸ IEX Letter VI at 7.

⁵⁷⁹ For example, in 2018, one market participant stated that the preexisting level of the access fee cap

The 10 mils access fee cap is appropriate because it will mitigate the potential conflicts of interest associated with the current fee and rebate models, while still allowing exchanges to use rebates to attract liquidity.

c. Agency Market Business Model

Several commenters stated that the Commission should not consider whether the proposed lowered access fee caps would unduly impair current agency market business models⁵⁸⁰ as a factor in its analysis.⁵⁸¹ According to one commenter, “setting access fee caps, or designing any aspect of market structure, specifically to preserve or protect existing exchange fee models is an inappropriate policy rationale.”⁵⁸² Similarly, another commenter stated that it “is not the Commission’s role to ensure that trading centers ‘maintain their current net capture rate.’”⁵⁸³ Further, one commenter stated that while, in its opinion, it would be appropriate for the Commission to “assess the impact of the proposed access fee cap on market participants’ varying business models,” it must “then account for the impact of the proposed access fee cap on all market participants and attempt to create the most

may “create misaligned incentives and potential conflicts of interest for broker dealers’ routing and execution decisions . . . because broker dealers may elect to post non-marketable limit orders on market venues offering the highest rebate and bypass those venues where there is greater likelihood of execution, but a higher fee.” Goldman 2018 Letter at 3–4. This market participant went on to state that “[b]y maintaining the Fee Cap at the level adopted in 2005 as spreads have narrowed and commissions have decreased over the past 13 years, these misaligned incentives and potential conflicts of interest have grown.” *Id.* at 4.

According to this market participant, adjusting the access fee cap to 10 mils “would reduce the effect of these misaligned incentives and the potential conflicts of interest.” *Id.* Further, a decade ago, one commenter stated “[a] reduction in the cap [to 10 mils] . . . would naturally move more executions back to exchanges.” Citigroup 2014 Letter at 7. Another commenter stated in 2015 that a reduction in the access fee cap to 5 mils (half of the amended level adopted) would “still allow room for exchanges to provide rebates to market participants in order to incentivize liquidity, while at the same time significantly reducing the market distortions and unnecessary complexity that access fees have caused.” Letter from Theodore R. Lazo, Managing Director & Associate General Counsel, SIFMA, to Mary Jo White, Chair, Commission, dated May 24, 2015, at 2–3 (stating its support for BATS’ 2015 Petition for Rulemaking to, among other things, reduce the baseline access fee cap to 5 mils).

⁵⁸⁰ See Proposing Release, *supra* note 11, at 80270 n.35 (stating “[a]gency market trading centers are those that bring together buyers and sellers and typically charge a fee for their execution services.”). See also Regulation NMS Adopting Release, *supra* note 4, at 37545.

⁵⁸¹ See, e.g., Citadel Letter I at 22–23; Schwab Letter II at 36; SIFMA Letter II at 39–40.

⁵⁸² SIFMA Letter II at 39–40.

⁵⁸³ Schwab Letter II at 36. See also Virtu Letter II at 17–18.

⁵⁶³ See *infra* section VII.D.

⁵⁶⁴ See *infra* section VII.D.2.c.

⁵⁶⁵ See *infra* section VII.D.2.c.

⁵⁶⁶ See *infra* section VII.D.2.

⁵⁶⁷ See *infra* note 1469, and accompanying text.

⁵⁶⁸ See *infra* section VII.D.2.c.

⁵⁶⁹ See, e.g., Proof Letter at 1; RBC Letter at 4; Ontario Teachers et al. Letter at 2; NASAA Letter at 9; Vanguard Letter at 6; BlackRock Letter at 10; Capital Group Letter at 4; Themis Letter at 7.

⁵⁷⁰ RBC Letter at 4.

⁵⁷¹ Proof Letter at 1.

competitive and effective environment on an overall basis, rather than doing so exclusively for exchanges.”⁵⁸⁴

In considering whether to adjust the level of the access fee caps, and if so, by what amount, the Commission has considered the impact of such modifications on market participants to help ensure that all investors will continue to have fair and non-discriminatory access to protected quotations and the Commission has not prioritized exchange revenues over other considerations. When the Commission adopted the access fee caps in Regulation NMS, it considered the impact of the caps on the agency market business model, as it has done in this release as well.⁵⁸⁵ Agency market trading centers have historically charged transaction fees for their agency services in bringing together buyers and sellers to execute transactions. The Commission is not prohibiting agency market trading centers from continuing to assess fees for providing execution services to access protected quotations. As discussed above, it was appropriate and consistent with its responsibilities under the Exchange Act for the Commission to consider the impact of the original access fee caps on the ongoing viability of different trading centers. Because of the important role agency market trading centers continue to play in the national market system, it is similarly consistent with the Exchange Act for the Commission to undertake a similar analysis today in adjusting the level of the caps.

The Proposing Release estimated the effect on exchange net capture because exchanges are the only trading centers that impose fees for access to protected quotations at this time and, therefore, are subject to the access fee caps.⁵⁸⁶ Further, the Commission’s analysis in the Proposing Release appropriately considered the impact of proposed changes to Rule 610(c) on entities employing an agency market business model because Rule 610(c) applies to those entities and the Commission was cognizant of not compressing the access fee caps so far as to effectively eliminate such business models.⁵⁸⁷ As discussed

above, the Commission stated that if markets are allowed to charge high access fees and pass most of them through as rebates, the published quotations of such markets will not reliably indicate the true price that is available and investors may be overcharged for taking liquidity.⁵⁸⁸ As discussed below, the Commission estimated the current net capture of the exchanges at approximately 2 to 6 mils and anticipates that will remain the same under amended Rule 610(c).⁵⁸⁹

As was the case with the original access fee caps, the amended fee caps will preserve the agency business model because trading centers will continue to be able to assess fees for transaction services at a level that will result in the same net capture as they earn today if they so choose. In this manner, the amended fee cap for protected stocks priced \$1.00 and above has been “drafted to have minimal impact on competition and individual business models while furthering the objectives of the Exchange Act by preserving the fairness and usefulness of quotations.”⁵⁹⁰ In determining the new levels of the access fee caps, the Commission has considered many factors, including allowing for a diversity of business models.⁵⁹¹ The amendments to Rule 610(c) will continue to allow the exchanges to provide execution services using their current business models, innovate and compete for order flow, while also reducing the costs to investors who must access protected quotations because access fees are being reduced to amounts above the exchanges’ net capture rates.

Exchanges are the only trading centers that currently display protected quotes in the national market system, and they play an important role in bringing together multiple buyers and sellers of

current business practices to continue while adjusting access fee levels to align with the proposed lower minimum pricing increments as well as reflect market innovations and technological efficiencies that have driven transaction costs down since rule 610(c) was adopted.”).

⁵⁸⁸ See Regulation NMS Adopting Release, *supra* note 4, at 37584.

⁵⁸⁹ See *infra* sections VII.C.2 and VII.D.2.b and notes 1101–1103 and accompanying text.

⁵⁹⁰ See Regulation NMS Adopting Release, *supra* note 4, at 37545. For the reasons discussed, the new access fee caps will continue to “provide the necessary support for the proper functioning of the Order Protection Rule, and private linkages, while leaving trading centers otherwise free to set fees subject only to other applicable standards (e.g., prohibiting unfair discrimination.”) *Id.*

⁵⁹¹ See *infra* section VII.D.2.b. As discussed below, the fees charged by ATSs for execution services are often in the range of 10 mils. See *infra* section VII.C.2, note 1118 accompanying text.

securities.⁵⁹² Exchanges are also responsible for certain important processes in the national market system, including openings, re-openings, and closings on the primary listing market; trading halts; initial public offerings and exclusively listed securities. The exchanges, along with FINRA, are also responsible for producing data for the consolidated market data feeds as well as the operation of the exclusive SIPs. In addition, the Commission has recognized these functions as “critical” to the operation of the securities markets for purposes of imposing requirements under Regulation SCI, which established a regulatory framework for oversight of the core technology of the U.S. securities markets.⁵⁹³ Therefore, it continues to be appropriate to consider the impact on this business model, *i.e.*, the agency market business model, when considering amendments to the access fee caps.

d. Comments on the Proposed 10 Mils Access Fee Cap

There was divergence of opinion around the appropriate level of the access fee cap for protected quotations priced at \$1.00 or greater.⁵⁹⁴ A number of commenters viewed 10 mils as the appropriate level.⁵⁹⁵ Commenters stated that a reduction in the level of the access fee cap to 10 mils is warranted because, among other reasons, it will result in lower costs to investors to access protected quotes;⁵⁹⁶ align access fees with other elements of investor transaction costs (all of which have decreased);⁵⁹⁷ recalibrate the access fee cap levels to reflect increased efficiencies, technological

⁵⁹² Rule 610(c) imposes the access fee caps on trading centers, which are defined to include other types of entities that can display protected quotes, including ATSs, OTC market makers and any broker or dealer that executes orders internally. 17 CFR 242.600(b)(106).

⁵⁹³ Securities Exchange Act Release No. 73639 (Nov. 19, 2014), 79 FR 72252 (Dec. 5, 2014) at 72277 (Final Rule “Regulation Systems Compliance and Integrity”).

⁵⁹⁴ See, e.g., *supra* notes 460, 463, 466 (recommending a reduction in fee cap to \$0.0015).

⁵⁹⁵ See, e.g., ASA Letter at 5 (strongly supporting 10 mils access fee cap for all NMS stocks); Better Markets Letter I at 16; BlackRock Letter at 10–11; BMO Letter at 3–4; Brandes Letter at 3; Boston Partners, Calamos Advisors, Glenmede Investment, and Janus Henderson Letter; Budish Letter; Capital Group Letter at 4; Council of Institutional Investors Letter at 3; IEX Letter IV at 1; Healthy Markets Letter I at 24; Ontario Teachers et al. Letter at 1–2; Themis Letter at 7–8; Vanguard Letter at 2 & 6; Invesco Letter at 2 and 4; JPMorgan Letter at 6; NASAA Letter at 9; Pragma Letter at 7; XTX Letter at 5; and Verret Letter II. See also *supra* note 422.

⁵⁹⁶ See, e.g., Ontario Teachers et al. Letter at 2; ASA Letter at 5; Council of Institutional Investors Letter at 3; Better Markets Letter I at 16.

⁵⁹⁷ IEX Letter VI at 1–2.

⁵⁸⁴ Virtu Letter II at 18.

⁵⁸⁵ See Regulation NMS Adopting Release, *supra* note 4, at 37545 (“stating ‘the adopted [30 mils] fee limitation will not impair the agency market business model.’”).

⁵⁸⁶ The Commission used these same estimates to determine the changes in the amount that liquidity demanders would pay and the amounts that liquidity providers would receive. See Proposing Release, *supra* note 11, at section V.D.3 (discussing impact of the proposed lower access fee caps on exchanges’ net capture).

⁵⁸⁷ See Proposing Release, *supra* note 11, at 80290–91 (proposing new caps designed to “allow

advancements and structural changes in the markets since Rule 610(c) was adopted;⁵⁹⁸ continue to allow for competitive business models and innovation;⁵⁹⁹ and align on-exchange pricing more closely with off-exchange venues such as ATSS.⁶⁰⁰ One commenter stated a 10 mil cap “would have the added benefit of aligning exchange fees with prevailing ATS fees and creating a more equitable competitive landscape across trading venues”⁶⁰¹ and another stated that “[t]he economic difference to a broker between routing to an . . . ATS [] versus an exchange would be much smaller than it is today, if a \$.0005–\$.0010 access fee cap replaces the current \$.0030 mil cap.”⁶⁰² According to one commenter, lowering the cap to 10 mils should “(1) lead to an increase in investor interaction with displayed quotes, (2) provide an economic reason for all participants to submit displayed quotes to an exchange, and (3) end the corrosive and discriminatory nature of the current exchange fee and rebate system.”⁶⁰³ Another commenter stated that reducing the level of the cap from 30 mils to 10 mils would “remove barriers to entry for new market participants,” especially smaller trading firms and retail investors.⁶⁰⁴ Further,

commenters stated that the proposed reduction of the access fee caps would be beneficial to retail investors, as well as institutional investors and long-term investors.⁶⁰⁵

Several commenters stated their support for reducing the amount of the access fee caps, but cautioned that further analysis is necessary to determine the appropriate amount and parameters of any reduction to avoid unintended consequences.⁶⁰⁶ The Commission disagrees for a number of reasons. Further delay is not warranted because the access fee caps have been extensively considered for many years.⁶⁰⁷ In addition, the Commission has weighed several factors in determining to reduce the access fee caps to 10 mils and, as discussed further below in the Economic Analysis, concludes that this reduced level appropriately accommodates various competing interests.⁶⁰⁸ The adopted level of 10 mils for access to protected quotes priced \$1.00 or more reflects the views of many commenters to the Proposing Release⁶⁰⁹ and has been suggested by market participants in other contexts.⁶¹⁰ Further, as discussed above, a 10 mil cap strikes an appropriate balance between reducing the cap to help to address distortions in the market associated with the preexisting fee caps, while also preserving the ability of the national securities exchanges to continue to operate with their current net capture rates.⁶¹¹ Finally, the Commission has reviewed the fees charged by trading centers that do not have protected quotes so do not have an incentive to charge excessive fees to market

participants required to access protected quotes and 10 mils is consistent with the range of rates assessed by such trading centers.⁶¹²

Other commenters recommended applying different access fee caps depending on the liquidity profile of a particular security.⁶¹³ Further, some commenters suggested specific alternative models and/or levels of access fee caps.⁶¹⁴ A few commenters stated that the access fee caps should be expanded to cover full depth-of-book quotations⁶¹⁵ or auctions.⁶¹⁶ However, one commenter disagreed with these concerns and stated that “the fee cap has been equally applied to all stocks regardless of price, spread, or trading volume since it was enacted” and further stated that “[e]xchange processing costs are exactly the same” regardless of these varying characteristics.⁶¹⁷

As discussed above, the access fee caps under Rule 610 establish the upper limit for fees that trading centers can charge for access to protected quotations. The access fee caps do not apply to depth-of-book quotations or auctions because these are not protected quotations. As discussed throughout, the access fee caps are designed to preserve fair and efficient access to protected quotations, regardless of the liquidity profiles of NMS stocks. Trading centers are able to develop different fee structures within this construct and in a manner that is consistent with the Exchange Act. The Commission is not setting the access fee caps to a specific percentage of the

⁵⁹⁸ See, e.g., Ontario Teachers et al. Letter at 1–2; Brandes Letter at 3; Invesco Letter at 4; Vanguard Letter at 6; Verret Letter I at 5; Verret Letter III at 4–5; Letter from John Ramsey, Chief Market Policy Officer, IEX, dated Feb. 23, 2024 (“IEX Letter V”) at 2–3; IEX Letter VI at 4.

⁵⁹⁹ See, e.g., Proof Letter at 1; BMO Letter at 4; Verret Letter I at 9; Ontario Teachers et al. Letter at 1–2; Verret Letter III at 22.

⁶⁰⁰ See, e.g., RBC Letter at 4; BlackRock Letter at 11; Verret Letter I at 7; Verret Letter III at 4–5; IEX Letter V at 5; IEX Letter VI at 5. *But see* Letter from Kevin R. Edgar, Partner, Baker & Hostetler LLP, dated Feb. 7, 2024, (“Equity Markets Association Letter”) at 2 (stating “allegations[] . . . that access fees are excessive, both in an absolute sense and relative to ATSS” are improper and further stating there is “no basis for such conclusions other than by making bald assumptions about exchanges’ costs . . . [N]et transaction fees are far lower on exchanges than they are on ATSS.”); Nasdaq Letter III at 3 (stating commenters’ analysis of ATSS-Ns revealed “large variations among ATS fees and some of them are similar or higher than exchange fees . . . including fees as high as \$0.06”); Nasdaq Letter IV at 7–8 (providing data regarding range of ATSS minimum/maximum fees and stating ATSS fees are highly variable and 10 mils is not representative of transaction fees on- or off-exchanges).

⁶⁰¹ BlackRock Letter at 11.

⁶⁰² RBC Letter at 4.

⁶⁰³ ASA Letter at 5.

⁶⁰⁴ See Verret Letter I at 9; Verret Letter III at 22. *But see* Letter from Barbara Comstock, Executive Director, American Consumer and Investor Institute, dated June 1, 2023 (“ACII Letter I”) at 6 (commenting generally that fundamental changes to existing market structure could roll back innovations that have “opened up today’s markets to millions of new and diverse investors.”); NASP Letter at 2 (commenting generally that proposed

NMS changes could harm retail investors by “making the process of buying and selling stock more difficult and potentially reinstating barriers to entry”); Nasdaq Letter II at 2–3 (stating “the cost of access fees has actually fallen since 2005 by one-third” and “the burden of access fees relative to the all-in trading costs of participants has not grown over time; instead, it has remained relatively flat.”).

⁶⁰⁵ See, e.g., Council of Institutional Investors Letter at 3; Ontario Teachers et al. Letter at 2; Themis Letter at 8; IEX Letter IV at 13, 23; Better Markets Letter I at 16.

⁶⁰⁶ See, e.g., STA Letter at 7–8; ICI Letter I at 16; Nasdaq Letter I at 2 and 19.

⁶⁰⁷ See *supra* notes 362 and 364.

⁶⁰⁸ See *infra* section VII.D.2.

⁶⁰⁹ See *supra* note 595.

⁶¹⁰ See Goldman 2018 Letter at 1–2 (stating commenter’s support for reducing the access fee cap to \$0.0010 because a 10 mil cap would be calibrated with then-present-day [2018] trading and execution costs, would better ensure displayed prices reflect the actual economic costs of an execution, and would allow exchanges to continue maintain their current net capture rates, while also choosing to offer rebates to incentivize liquidity provision if they chose to do so). Further, the EMSAC also considered, among other things, whether the access fee cap should be modified. See *supra* note 4.

⁶¹¹ See *infra* section VII.D.2.

⁶¹² See *infra* note 1118. The Commission acknowledges variability within the rates assessed by ATSS, with some transactions subject to fees above 10 mils and some below 10 mils based on attaining certain levels of volume as well as other variability within the fee schedules. Commenters have stated that the fees they experience are often in the range of 10 mils, which is informative in considering an appropriate level of the access fee caps because such statements reflect the current market rate paid for execution services as reported by participants. See *infra* notes 658–659 and accompanying text.

⁶¹³ See, e.g., BlackRock Letter at 10–11; T. Rowe Price at 4–5; Citigroup Letter at 5–6.

⁶¹⁴ See, e.g., MEMX Letter at 3 and 24–28; Nasdaq Letter I at 19; William O’Brien, Former CEO, Direct Edge, dated Apr. 13, 2023 (“O’Brien Letter”) at 5; Optiver Letter at 3.

⁶¹⁵ See, e.g., Citadel Letter I at 25; FIA PTG Letter II at 3.

⁶¹⁶ MEMX Letter at 3, 24–28.

⁶¹⁷ IEX Letter VI at 3. This commenter further stated that the “benefits that exchanges have received from technological advances and increased efficiencies in determining their own costs to process orders . . . apply exactly in the same way for trading in all classes of securities” and therefore retaining a uniform, lower “fee cap across all stocks (priced greater than \$1.00 per share) avoids further complexity to trading decisions from fees that can vary for the same stock based on changes in the applicable tick size.” *Id.*

minimum pricing increments in part because they address different regulatory objectives. An important objective of an access fee cap (to preserve access to protected quotes) is distinct from an objective of tick size (e.g., to prevent stepping ahead of displayed orders).⁶¹⁸ However, as discussed above, because the Commission is reducing the minimum pricing increment under Rule 612, it is also reducing the levels of the access fee caps to prevent the distortions that would occur if an access fee is more than one half of the tick.⁶¹⁹

Further, amending Rule 610 to adopt variable caps to reflect different liquidity profiles of different stocks would expand and change the objective of the rule, which is to ensure the fairness and accuracy of protected quotations by establishing an outer limit on the cost of accessing such quotations.⁶²⁰ The access fee caps were not designed to establish fees for executions, they were designed to limit the amount of fees that can be charged for access to the best priced quotes in the national market system. Trading centers may adopt fees (and rebates) to incentivize trading in NMS stocks with different liquidity profiles in a manner consistent with the Exchange Act, including the limits imposed by the access fee caps.

Another commenter stated that there is no valid basis to support a claim that the current fee cap is excessive.⁶²¹ This commenter stated that the Commission did not substantiate reduced costs as a justification for lowering the access fee caps.⁶²² This commenter also stated that, “the Commission present[ed] no cost-based methodology for arriving at the levels of access fee caps it proposes”⁶²³ and therefore the proposed caps are “arbitrary and capricious” because the caps do not “bear a reasonable relationship to the actual costs of executing trades on the exchanges.”⁶²⁴ The commenter further stated that “[t]echnology costs, and improvements thereto, are not

significant determinants of access fee levels.”⁶²⁵ Further, this commenter also stated that “exchange platform costs” (i.e., the constellation of related services of which transaction services are only one part) to market participants have “remained competitive over time.”⁶²⁶ Finally, according to this commenter, “access fees and rebates represent more than the simple economic costs to an exchange of effecting a trade; they also reflect the value of the information that quotes provide to the market, and the value to participants of having access to those quotes.”⁶²⁷ Another commenter stated that the current cap was “rather arbitrarily selected” and in its view has “resulted in continued industry disagreement.”⁶²⁸

However, another commenter disagreed, stating “the current access fees are unreasonably high when taking into consideration the lower exchange costs stemming from increased efficiencies and technology advancements that have occurred since 2005.”⁶²⁹ Although other trading costs have decreased, access fees have not and, according to this commenter, such fees “now represent an outsized portion of transaction costs.”⁶³⁰ The commenter further stated it was appropriate for the Commission to rely on reduced costs to justify the reduction in the access fee cap.⁶³¹ The commenter stated because “the 30-mil cap exceeds the typical cost to trade on non-protected venues, it encourages investors to seek alternatives to accessing displayed quotes” which drives order flow to off-exchange venues.⁶³²

As discussed throughout this release,⁶³³ market participants have stated that the access fee caps are outdated and no longer reflect the current market structure. One commenter stated that the Commission, by identifying that the markets have changed due to market innovations and technological efficiencies and that transaction and trading costs had been

reduced, and providing statements of market participants to support this statement,⁶³⁴ was suggesting that the access fee cap “no longer bears a reasonable relationship to the actual costs of a trade.”⁶³⁵ This misconstrues the Commission’s statement recognizing that the markets are different than they were in 2005. Under the preexisting access fee caps, fee and rebate structures have developed such that access fees are predominantly used to pay rebates to liquidity providers and these structures have resulted in distortions in the market.

The Commission considered many factors and the views of commenters, and balanced competing factors when it adopted the original fee caps in 2005.⁶³⁶ Likewise, as discussed above, the Commission again has considered and balanced many factors,⁶³⁷ including the effects on liquidity and trading costs for market participants⁶³⁸ in coming to the determination that the 10 mils access fee cap is appropriate for all protected quotations priced \$1.00 or more.⁶³⁹ As discussed throughout this release, the Commission has reduced the caps to a level that is sufficient to mitigate the market distortions associated with the fee schedules that have been developed under preexisting access fee caps and to accommodate the new minimum pricing increments under amended Rule 612, while also preserving the viability of the agency market business model.⁶⁴⁰

Most exchanges provide access to protected quotations and retain an estimated net capture of 2 mils.⁶⁴¹

⁶³⁴ See Proposing Release, *supra* note 11, at 80290 n.293.

⁶³⁵ Nasdaq Letter I at 21. See also Nasdaq Letter II.

⁶³⁶ See generally, Regulation NMS Adopting Release, *supra* note 4.

⁶³⁷ See *supra* note 608 and surrounding text.

⁶³⁸ See *infra* section VII.D.2.c (analyzing the effects of rebates for providing liquidity).

⁶³⁹ Several commenters stated that access fees under the preexisting caps have become a larger portion of overall transaction costs because such costs have decreased significantly since the access fee cap levels were established almost two decades ago. See, e.g., *infra* notes 1438–1441 and accompanying text and *supra* 364 and 365 and *supra* notes 597–598 (describing reasons why costs have decreased). The Commission has considered costs, and specifically commenters’ concerns relating to costs, as one of several factors in its analysis and determination that a 10 mils access fee cap is appropriate. As the Commission stated in 2005, reaching appropriate policy decisions in a complex area such as fees for access to the best quotations displayed in the national market system requires balancing policy objectives that sometimes may not point in precisely the same direction. See Regulation NMS Adopting Release, *supra* note 4, at 37498.

⁶⁴⁰ See *supra* section IV.D.1.c. and *infra* section VII.D.2.b.

⁶⁴¹ See *supra* section IV.D.1.c. and *infra* sections VII.C.2 and VII.D.2.b and notes 1101–1103 and

⁶¹⁸ See *supra* section III.A and section III.C.1.

⁶¹⁹ See *infra* section VII.D.2.a and notes 1419 and 1425.

⁶²⁰ See also note 351.

⁶²¹ Nasdaq Letter III at 2.

⁶²² See Nasdaq Letter I at 21; Nasdaq Letter II at 4. This commenter stated that “determining such costs and setting appropriate rates based upon those costs are inherently difficult” and further stated that “a government agency like the Commission is ill-suited to tackle [such a task]” and should refrain from doing so. Nasdaq Letter I at 22. See also Cboe Letter III at 5; Nasdaq Letter III; Equity Markets Association Letter at 2.

⁶²³ Nasdaq Letter II at 4–5.

⁶²⁴ Nasdaq Letter II at 4. See also Nasdaq Letter III at 2; Nasdaq Letter I at 22.

⁶²⁵ Nasdaq Letter II at 4. See also Nasdaq Letter III at 2.

⁶²⁶ Nasdaq Letter II at 4–5.

⁶²⁷ Nasdaq Letter I at 21; Nasdaq Letter II at 4.

⁶²⁸ Cboe Letter II at 8.

⁶²⁹ IEX Letter IV at 8. See also Better Markets Letter I at 16 (“There is certainly no economic justification in terms of defraying the exchanges’ costs of processing and matching trades, as those costs have dropped with the advent of advances in technology.”); Verret Letter III at 13 (“Access fees charged to broker-dealers and other market participants simply to access liquidity on certain exchanges often greatly exceed the actual costs associated with providing that liquidity access.”).

⁶³⁰ IEX Letter IV at 8. See also Goldman Sachs 2018 Letter at 1–2.

⁶³¹ See IEX Letter IV at 6.

⁶³² IEX Letter IV at 8.

⁶³³ See, e.g., *supra* section IV.B.2.

However, as discussed below,⁶⁴² a net capture of 2 mils is not uniform across all exchanges and some have an estimated net capture that is higher than 2 mils.⁶⁴³ This suggests that the preexisting levels of the access fee caps are higher than necessary to preserve the viability of the agency market business models. The adopted level of 10 mils for access to protected quotes priced \$1.00 or more is appropriate because it will allow trading centers to continue to provide access to protected quotations and retain a net capture to fund their transaction services.

Recalibrating the level of the cap with a consideration of current market rates to provide execution services is appropriate and consistent with how the Commission set the preexisting rates.⁶⁴⁴

Finally, as stated above, the access fee caps were not developed as a means to enable the payment of rebates. However, under the preexisting access fee caps, access fees are predominantly used to fund the rebates paid to liquidity providers. As also stated above and discussed further below, liquidity providers are able to post bid and offer prices that account for the risk of displaying protected quotations without needing the payment of a rebate.⁶⁴⁵

In deciding to adopt a single 10 mil fee cap for all protected quotes in NMS stocks priced \$1.00 or more, the Commission has also considered the rates charged by other agency markets for access to non-protected quotation liquidity because such trading centers are not subject to the preexisting 30 mils access fee cap and therefore the rates for execution services established by such markets are subject to competitive market forces that are not capped.⁶⁴⁶

One commenter stated that ATS fees are not a good benchmark to determine the appropriate level of exchange access fees because, in their view, exchange access fees should be higher than off-exchange venues' access fees.⁶⁴⁷ This commenter stated that "[e]xchange access fees compensate for the risk associated with posting lit quotes as well as the value associated with

accessing immediate liquidity.”⁶⁴⁸ In addition, according to this commenter, exchange pricing is “designed to attract quotes, whereas ATS pricing is designed only for trades” and ATSs “leverage lit quotes” produced by exchanges to determine ATS’s transaction pricing.⁶⁴⁹ Finally, this commenter stated that the rates charged by off-exchange venues “vary significantly in structure, functionality, and fees” to the extent they are actually known publicly and disagreed with the conclusion that “10 mils is a representative fee for accessing liquidity off exchange.”⁶⁵⁰

Other commenters disagreed.⁶⁵¹ According to one commenter, certain ATSs provide specialty services such as block trading and the ability to use conditional order types to achieve certain trading strategies, and typically charge higher than 10 mils for such specialized services.⁶⁵² However, according to this commenter, ATSs that operate a continuous book market are similar to exchanges that provide similar services and those ATSs charge “a maximum rate of 10 mils” for such services and such venues collectively represent approximately 42% of all ATS volume during 2023.⁶⁵³ According to this commenter, “this data is strong evidence that the standard comparative rate for immediate access to liquidity in NMS stocks on ATSs that offer this [continuous book] service is, in fact, 10 mils per share.”⁶⁵⁴ This commenter further stated that exchanges are “able to charge higher prices than other markets, precisely because of the

‘protected quote’ status” which is “what the SEC sought to prevent in 2005, in furtherance of the statutory goal of fair distribution of quotation information.”⁶⁵⁵

The fees charged by many ATSs that provide execution services similar to exchanges are often reflected in a range and sometimes are based on volume transacted, and ATSs typically do not pay rebates.⁶⁵⁶ As stated above, several commenters stated that a 10 mils access fee cap would be consistent with the access fees charged by ATSs.⁶⁵⁷ These statements are informative in considering an appropriate level of the access fee caps because they reflect the current market rate paid for execution services as reported by market participants.⁶⁵⁸ This, in concert with the net capture rates discussed above, suggests that the current access fee caps may not be consistent with current market rates for providing execution services.⁶⁵⁹

Considering the rates charged by trading centers is consistent with the analysis the Commission conducted to determine the appropriate level of the preexisting access fee caps when it adopted them. Specifically, the Commission considered the access fees charged by ECNs and other types of trading centers, including self-regulatory organizations (“SROs”), when it adopted the preexisting 30 mil

⁶⁵⁵ IEX Letter IV at 6. *But see* Nasdaq Letter V at 2 (stating “ATSes enjoy advantages [including the ability to segment order flow] that would persist, and likely increase, with a lower cap on access fees.”).

⁶⁵⁶ *See infra* sections VII.C.2.b and VII.D.2, note 1118 and accompanying text. *See also* Proposing Release, *supra* note 11, at 80314 (stating a review of form ATS-Ns on which ATSs provide a range of the fees charged shows such fees are often in the range of 10 mils).

⁶⁵⁷ *See supra* note 651.

⁶⁵⁸ *See, e.g.*, IEX Letter I at 22–23; IEX Letter IV at 14–15; IEX Letter V at 5–6; BlackRock Letter at 11; Verret Letter II at 4. *See also* Letter from Stacey Cunningham, President, NYSE, to Brent Fields, Secretary, Commission, dated Oct. 2, 2018 (commenting on File No. S7–05–18 “Transaction Fee Pilot for NMS Stocks”) (stating reducing the access fee cap to 10 mils will bring the access fees exchanges charge to remove liquidity in line with the rates charged by ATSs). According to one commenter, “the rates charged by ATSs to access liquidity allow comparison to market-based prices that are not affected by prices imposed by exchanges to access protected quotes . . . [and] an informal survey of ATS operators indicates that the standard access fee charged by most ATSs is approximately 10 mil.”). *See also supra* note 651 and accompanying text.

⁶⁵⁹ *See* Letter from Theodore R. Lazo, Managing Director & Associate General Counsel, SIFMA, to Brent J. Fields, Secretary, Commission, dated Mar. 9, 2017, at 8 (stating “a significant portion of access fees are used to subsidize rebates with the exchanges’ net capture reflecting today’s market norms for accessing liquidity, which is approximately 3–5 cents per 100 shares traded . . . or 3–5 mils.”).

accompanying text. As discussed below in the Economic Analysis, the Commission estimates for purposes of this release that exchange net capture is 2 mils, while also recognizing that net capture can range from approximately 2 to 6 mils. *See infra* note 1103.

⁶⁴² *See id.*

⁶⁴³ *See id.*

⁶⁴⁴ *See infra* note 357 and discussion below.

⁶⁴⁵ *See supra* section IV.B.2.b. *See also infra* section VII.D.2.c and note 1458 and accompanying text.

⁶⁴⁶ *See infra* notes 1116–1118 and accompanying text.

⁶⁴⁷ Nasdaq Letter IV at 8.

⁶⁴⁸ Nasdaq Letter IV at 8.

⁶⁴⁹ *Id.*

⁶⁵⁰ Nasdaq Letter IV at 7. This commenter further stated “nothing beyond anecdotal reports suggests that 10 mils is a representative fee for accessing liquidity off exchange.” *Id.*

⁶⁵¹ *See, e.g.*, IEX Letter VI at 5 (stating “ATSs that accept and process orders for NMS stocks in the same way as exchanges do characteristically charge in the range of 10 mils per share.”); BlackRock Letter at 11 (stating that 10 mil cap “would have the added benefit of aligning exchange fees with prevailing ATS fees and creating a more equitable competitive landscape across trading venues”); Verret Letter I at 7 (lowering access fee cap from 30 mils to 10 mils would be “more in line with the fees charged by most ATS platforms.”); IEX Letter V at 5 (stating because ATS fees “are affected by market forces and not pegged by regulation, they are highly relevant to the question of where to set an updated fee cap.”). *See also* Letter from Stacey Cunningham, President, NYSE, to Brent Fields, Secretary, Commission, dated Oct. 2, 2018 (commenting on File No. S7–05–18 “Transaction Fee Pilot for NMS Stocks”) (stating reducing the access fee cap to 10 mils will bring the access fees exchanges charge to remove liquidity in line with the rates charged by ATSs).

⁶⁵² IEX Letter VI at 5–6; IEX Letter V at 5–6.

⁶⁵³ IEX Letter VI at 5 (referencing public data showing ATS access fees in the range of 10 mils and below). *See also* IEX Letter V at 5–6.

⁶⁵⁴ IEX Letter VI at 5 (stating 10 mils is the relevant comparative rate charged by ATSs).

access fee cap to gain insight into the then current market rates for execution services.⁶⁶⁰ At the time of adoption in 2005, the \$0.0030 fee limitation was based on the then-prevailing market rates for execution services and general business practices, as very few trading centers charged fees in excess of that amount.⁶⁶¹ As it did in 2005 in establishing the preexisting fee caps, to determine the appropriate level of the amended access fee caps, the Commission has similarly considered the current market rate for execution services as measured by the rates charged by other trading centers as a factor in considering the level of the adopted access fee caps.⁶⁶² This factor is useful in calculating the level of the access fee caps, but it is not the only factor. The Commission is balancing the need to set a level of the access fee caps to allow for fair and efficient access while also seeking to ensure that trading centers are not impaired in their ability to provide execution services.

e. Protected Quotes Priced Under \$1.00

With respect to the access fee cap for protected quotations priced under \$1.00, one commenter stated its view that “the negative impact of the proposed access fee caps is much more pronounced for securities priced less than \$1.00.”⁶⁶³ The commenter stated that for protected quotations priced less than \$1.00, the “estimated revenue impact to exchanges providing rebates in these securities [those priced below \$1] is not insignificant” and that “the access fee cap must remain unchanged to support competition, differentiation, and liquidity provision.”⁶⁶⁴ This commenter also stated that “[s]implistic proportionality is not a sufficient justification for this reduction” and instead “[a]nalysis of whether there will be proportionate outcomes is necessary to overcome the arbitrary and capricious nature of this reduction.”⁶⁶⁵ Finally, this commenter stated that the reduction would “likely impact exchanges’ ability to differentiate, as well as materially limit the transaction revenue that

exchanges apply towards developing innovative solutions that contribute to the robustness of the U.S. marketplace.”⁶⁶⁶

One commenter stated that reducing the access fee cap generally would reduce the disincentive to trade on exchanges because costs would be lower.⁶⁶⁷ Another commenter stated that the estimated loss in net capture due to the reduction in the access fees for protected quotation priced below \$1.00 “will not harm the major exchanges.”⁶⁶⁸

The Commission is adopting a modified access fee cap of 0.1% of the share price for protected quotations priced under \$1.00. The Commission proposed a lower access fee cap of 0.05% of the quotation price per share in light of the proposed 5 mils access fee cap. Since the 5 mils access fee cap is not being adopted, the Commission has modified the access fee cap for protected quotes priced under \$1.00 so that it is consistent with the 10 mils access fee cap for protected quotes priced \$1.00 or more.

The adopted 0.1% access fee cap will align this cap with the 10 mils access fee cap that will apply to protected quotations in NMS stocks priced \$1.00 or greater.⁶⁶⁹ This alignment is consistent with the access fee caps that apply under the preexisting rule, which are 30 mils and 0.3% respectively. Alignment of the access fee caps for protected quotations in NMS stocks priced below \$1.00 and those priced \$1.00 and above is necessary to preserve continuity at the \$1.00 cutoff to ensure that cost to access a protected quote for an NMS stock that is priced below \$1.00 is not more compared to the cost to access a protected quote for the same NMS stock that is priced \$1.00 or more.⁶⁷⁰ For example, an NMS stock could have a protected bid that is priced below \$1.00 and a protected offer that is priced above \$1.00. If the access fee cap for protected quotes priced below \$1.00 remained at the preexisting level, the access fee for the protected bid would be almost three times higher than the access fee for the protected offer.⁶⁷¹ In such an instance, it would cost more to trade against the bid than to trade

against the offer and negatively impact incentives for accurate price formation.⁶⁷²

The Commission understands that reducing the access fee cap for stocks priced below \$1.00 could reduce exchange revenue.⁶⁷³ This is because exchanges typically charge the maximum fee of .3% for accessing protected quotes priced less than \$1.00 and do not offer rebates, or offer rebates in small amounts.⁶⁷⁴ Accordingly, exchanges typically retain the full amount of the access fee charged. However, in order to prevent the distortions that would occur if a higher access fee cap were applied to protected quotes priced less than \$1.00, the Commission is adopting the percentage cap that is aligned with the access fee cap that is applicable to protected quotes priced \$1.00 or more to preserve continuity at the \$1.00 cutoff.

f. Comments on Implementation

Some commenters stated that the Commission should build in an evaluation process to assess the benefits and any potential degradations to market quality resulting from changes to the access fee caps.⁶⁷⁵ One commenter stated that the rule should “include a mechanism in the rule to periodically re-evaluate the access fee caps set in the proposal to ensure that access fee levels continue to have the anticipated benefits.”⁶⁷⁶ Others recommended application of the new access fee caps to a smaller subset of NMS stocks before rolling it out to all NMS stocks.⁶⁷⁷ One commenter stated that changes to access fees should be adopted as part of a pilot to allow for a study of the effects on market quality.⁶⁷⁸ Another commenter stated the Commission should first collect more data and industry input and conduct further analysis to determine the optimal access fee cap levels before proceeding.⁶⁷⁹ One commenter, however, disagreed that any delay to collect further data or conduct additional analysis was warranted.⁶⁸⁰

⁶⁷² See also *infra* section VII.D.2.c.

⁶⁷³ See table 14, *infra* section VII.D.2.b.

⁶⁷⁴ See *infra* note 1433 and accompanying text.

⁶⁷⁵ See, e.g., Citigroup Letter at 6; NASAA Letter at 9; MEMX Letter at 41; Nasdaq Letter I at 2; and Nasdaq Letter IV at 12.

⁶⁷⁶ NASAA Letter at 9.

⁶⁷⁷ See, e.g., STA Letter at 8; State Street Letter at 5; CCMR Letter at 27; GTS Letter at 6–7; Nasdaq Letter I at 30.

⁶⁷⁸ CCMR Letter at 27.

⁶⁷⁹ See, e.g., T. Rowe Price Letter at 3–5. See also SIFMA Letter II at 39–40; Chamber of Commerce Letter at 1; Cboe, State Street, et al. Letter at 3; Citadel Letter I at 24–25.

⁶⁸⁰ See IEX Letter III at 4 (“There is clear evidence that the 30-mil ‘limit’ has acted to keep access fees artificially high, leading to price distortions and

⁶⁶⁰ See Regulation NMS Adopting Release, *supra* note 4, at 37545.

⁶⁶¹ See Regulation NMS Adopting Release, *supra* note 4, at 37545 (stating that the \$0.0030 per share cap largely codified the then-prevailing fee level set through competition among the various trading centers).

⁶⁶² See *supra* note 357 and *infra* section VII.D.2.

⁶⁶³ Cboe Letter II at 9. The Commission conducted similar analysis when it adopted preexisting Rule 610(c), and as discussed below, having different access fee caps apply to a bid that is priced under \$1.00 and an offer that is priced over \$1.00 in the same NMS stock would create pricing distortions. See *infra* section VII.D.2.c.

⁶⁶⁴ Cboe Letter II at 9.

⁶⁶⁵ Cboe Letter II at 9.

⁶⁶⁶ Cboe Letter II at 9.

⁶⁶⁷ Better Markets Letter I at 16.

⁶⁶⁸ Themis Letter at 7.

⁶⁶⁹ See *infra* section VII.D.2.c. As the price of a stock moves across the \$1.00 cutoff, its access fee would not experience a discontinuous jump because 0.1% of \$1.00 is 0.1 cents, i.e., 10 mils. Such alignment prevents the anomalous result that could occur if the NBB was priced under \$1.00 and the NBO was priced over \$1.00 and each protected quote would be subject to a different access fee.

⁶⁷⁰ See also *infra* section VII.D.2.c.

⁶⁷¹ See also *infra* section VII.E.2.b.

According to this commenter, there is a “mountain of evidence supporting a reduction in the access fee cap from current levels” and “general consensus in favor of reducing the cap.”⁶⁸¹

The Commission disagrees with commenters’ suggestions that further study be conducted before adopting the amendment or that the amendment should be incrementally rolled out. A delayed or incremental approach to reducing the preexisting access fee caps would delay the benefits to investors of the reduced caps. The Commission has extensively considered the adopted amendments, reviewed all comments letters and conducted extensive economic analysis in deciding to adopt this amendment. The amended access fee caps will provide savings for investors and should be implemented.

E. Final Rule 610(d) Requiring That All Exchange Fees and Rebates Be Determinable at the Time of an Execution

Many exchange fees and rebates are calculated at the end of the month, which impedes the ability of market participants, including investors, to understand at the time of execution the full cost of their transaction. For example, the exchanges have developed complex fee and rebate schedules, some of which include tiers or other incentives based on a market participant’s relative monthly trading volume or relative volume compared to the consolidated trading volume in the current month, with higher volume tiers receiving a higher (lower) per unit rebate (fee). This means that the exact fee or rebate amount for an order cannot be determined until the end of the month, after an execution occurs, and is not known to the parties to the trade at the time of execution. Further, uncertainty regarding the fee amount at the time of execution can hinder the ability of market participants to conduct best execution analyses and can affect order routing decisions.

To provide further transparency regarding transaction pricing, the Commission proposed to amend Rule 610 to add a new subsection (d) “Transparency of Fees,” which would prohibit a national securities exchange from imposing, or permitting to be imposed, any fee or fees, or providing, or permitting to be provided, any rebate or other remuneration (e.g., discounted fees, other credits, or forms of linked pricing) for the execution of an order in

an NMS stock unless such fee, rebate or other remuneration can be determined by the market participant at the time of execution. As the Commission explained in the Proposing Release, under proposed Rule 610(d), any national securities exchange that imposes a fee or provides a rebate that is based on a certain volume threshold, or establishes tier requirements or tiered rates based on minimum volume thresholds, would be required to set such volume thresholds or tiers using volume achieved during a stated period prior to the assessment of the fee or rebate so that market participants are able to determine what fee or rebate level will be applied to any submitted order at the time of execution.⁶⁸² For example, if an exchange proposed a lower fee for members that reach a certain level of trading volume in a month, the required level of trading volume would have to be achieved based on a month prior to the imposition of the fee or payment of the rebate.⁶⁸³

The Commission has considered commenters’ views (as discussed below) and is adopting Rule 610(d) as proposed. Investors can use this information to assess their broker-dealer’s routing decisions and such information will help to inform market participants’ best execution analysis.

1. General Comments

The Commission received comments from a broad range of commenters who stated that proposed Rule 610(d) would provide enhanced transparency surrounding transaction fees and rebates⁶⁸⁴ and alleviate concerns related

to potential conflicts of interest.⁶⁸⁵ One commenter stated that proposed Rule 610(d) would “shed greater transparency on the use of fee and rebate tiers and their impact on individual trades” and “help to address concerns related to conflicts of interest[] because . . . investors will be in a better position to identify and seek the recovery of rebates that accrue specifically to their orders . . .”⁶⁸⁶ Further, one commenter stated that such a change is “a great step forward and long overdue,”⁶⁸⁷ and another commenter stated that it would be “a positive outcome for the industry and investors and w[ould] reduce market complexity and increase transparency.”⁶⁸⁸ One commenter stated that Rule 610(d) “has the potential to facilitate broker-dealers in passing-through access fees and rebates to their customers, and in doing so, it could alleviate concerns [] about perceived conflicts-of-interest associated with the maker-taker model and the provision of exchange rebates to broker-dealers.”⁶⁸⁹

Other commenters’ support for Rule 610(d) was more measured because they stated that the proposal did not go far enough to address market distortions resulting from fee and rebate tiers.⁶⁹⁰ One such commenter stated that although it was “encouraged about eliminating the retroactive attributes of exchange volume tiers,” it felt a “more optimal solution [] would be to remove them entirely”⁶⁹¹ because “exchange

Boiler Letter II”) at 3 (agreeing with Angel Letter); Citigroup Letter at 6; BMO Letter at 4; Council of Institutional Investors at 4. See also Comment Letter Type H, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>.

⁶⁸⁵ See, e.g., BMO Letter at 4; NASAA Letter at 9.

⁶⁸⁶ IEX Letter I at 28–29. See also Letter from Stanislav Dolgoplov, Chief Regulatory Officer, Decimus Capital Markets, LLC, dated Mar. 31, 2023, at 3 (“Decimus 2023 Letter”).

⁶⁸⁷ Angel Letter at 8. See also BMO Letter at 4; Healthy Markets Letter I at 25.

⁶⁸⁸ Fidelity Letter at 15. See also ICI Letter I at 17.

⁶⁸⁹ Nasdaq Letter I at 32. See also Letter from Tyler Gellach, President & CEO, Healthy Markets Association, dated Aug. 1, 2023 (“Healthy Markets Letter II”) at 11.

⁶⁹⁰ See, e.g., RBC Letter at 5; ASA Letter at 5; IEX Letter I at 29; Letters from Kelvin To, Founder and President, Data Boiler Technologies, LLC, dated Mar. 31, 2023 (“Data Boiler Letter I”) at 5; Themis Letter at 1 (expressing support for the proposal, but expressing disappointment that the Commission did not go further and calling for the elimination of rebates); Healthy Markets Letter I at 24 (“If two different brokers send the exact same order to an exchange, they should get the same pricing for that order. Pricing should be based on the order being sent, not the other business or trading by the party sending it.”).

⁶⁹¹ RBC Letter at 5. See also Proof Letter at 1–2 (supporting requiring exchange pricing to be

increasing costs to institutional investors in particular.”).

⁶⁸¹ IEX Letter III at 4. See also Verret Letter II at 4; IEX Letter III.

⁶⁸² National securities exchanges establish and amend their fee schedules by filing proposed fee rule changes, pursuant to section 19(b) of the Exchange Act and rule 19b-4 thereunder, for Commission review. National securities exchange fee schedules are posted on their websites. See Rule 19b-4(l). Some national securities exchanges currently use volume calculated on a monthly basis to determine the applicable threshold or tier rate. See, e.g., fee schedules of Nasdaq PSX available at https://www.nasdaqtrader.com/Trader.aspx?id=PSX_pricing (as of Mar. 2024) (calculating fees based on “average daily volume during the month”) and Cboe EDGA available at <https://www.cboe.com/us/equities/membership/fee-schedule/edga/> (as of Mar. 2024) (calculating fees based on “average daily volume” and “total consolidated volume” on a monthly basis).

⁶⁸³ This amendment to Rule 610 does not alter an exchange’s ability to determine the measurement period during which volume is calculated (e.g., a week prior, two weeks prior, or prior monthly), rather the rule will instead require the measurement period to be prior to the date of execution so that market participants can determine the amount of the fee at the time of execution.

⁶⁸⁴ See, e.g., Ontario Teachers et al. Letter at 2; ASA Letter at 6; Angel Letter at 8; Letter from Kelvin To, Founder and President, Data Boiler Technologies, LLC, dated Apr. 12, 2023 (“Data

volume tiers create barriers to entry that only benefit the largest, most active trading firms at the expense of smaller competitors.”⁶⁹² One commenter stated its support for Rule 610(d), but also stated that the Commission should “take additional steps . . . to prohibit or restrict the use of CADV-based tiers,” which in this commenter’s view are “by their nature [] highly anti-competitive and discriminatory.”⁶⁹³ Further, one commenter “encouraged the Commission to review and address the issue of ‘bespoke’ pricing tiers prevalent in today’s volume tiered pricing models.”⁶⁹⁴ Another commenter, while agreeing with the objective of fee transparency, was skeptical that Rule 610(d) “would ‘materially reduce’ uncertainty regarding the fee amount at the time of execution” and stated that the proposal would provide “little practical transparency for most Market Participants.”⁶⁹⁵

Rule 610(d) will provide additional certainty, transparency and clarity to exchange fee structures, which will assist investors and other market participants in assessing their order placement. Further, certainty about the cost of a transaction at the time of the trade will help broker-dealers make more informed order routing decisions, particularly benefitting customers that are sensitive to transaction costs at the execution venue, because broker-dealers and their customers will know with more certainty the cost of an exchange transaction at the time of the trade. Investors will be able to obtain or request at the time of execution details about the exchange fees and rebates assessed on their orders without having to wait weeks until that pricing is determined and invoiced.

In addition, because the rule will allow market participants to know the amount of fees and rebates that are applicable to their transactions at the time of the trade, the rule will facilitate

the ability of broker-dealers to pass back to their customers, if the customer requests and the customer and the broker-dealer both are able to accommodate the pass-through of fees, rebates, and other forms of remuneration in a more timely fashion.⁶⁹⁶ Today, lower fees or higher rebates based on volume achieved in a current trading month can lead to routing for purposes of achieving a certain level of volume or attaining a possible tier level rather than routing solely to achieve best execution. While tiers that are based on volume from a previous time-period may still incentivize routing by a broker-dealer to try to secure a higher rebate/lower fee tier in the following month, certainty regarding what tier applies at the time of trade will facilitate the ability of a broker-dealer to pass those fees and rebates through to their customers, if they so decide,⁶⁹⁷ on a more timely basis because they will be known at the time of the trade.⁶⁹⁸ Requiring certainty regarding the amount of the fee/rebate is an incremental step toward addressing commenters’ concerns regarding the ability of exchanges and brokers to pass back the actual fee or report on each transaction.

If market participants pass through in their entirety the exchange fees/rebates to their customers, an ancillary benefit of the new rule will be that the potential inducement to broker-dealers to route orders based on garnering the highest rebate/paying the lowest fee will be reduced since a broker-dealer would no longer retain for itself the transaction pricing benefit from its routing decision. The new rule also will facilitate a customer’s ability to obtain more timely information about what exchange transaction pricing the broker-dealer receives, which may increase accountability of the broker-dealer to the customer in ways that could lead to

better order execution and more transparency regarding the fees/rebates applicable to a particular order.

Other commenters voiced support for the Commission’s objectives in proposing Rule 610(d), but suggested certain modifications. One commenter stated that it “did not object in principle to . . . requir[ing] exchanges to set volume-based access fees and rebates as of the time of execution” provided other market centers would be held to “the same standards of transparency.”⁶⁹⁹ As discussed in the Proposing Release, exchange fees and the fees of non-exchange trading centers are treated differently under the Federal securities laws.⁷⁰⁰ Specifically, non-exchange fees are not subject to the requirements applicable to exchange fees under sections 6(b) and 19(b) of the Exchange Act⁷⁰¹ and rule 19b-4 thereunder.⁷⁰² Exchange fees are subject to the requirements of the Exchange Act and the rules thereunder, which requires, among other things, that every exchange post and maintain a current and complete version of the entirety of each and every fee, due, and charge assessed by an exchange,⁷⁰³ and that such exchange rules applicable to fees must provide for the equitable allocation of reasonable dues, fees, and other charges among its members and issuers and other persons using its facilities and not be designed to permit unfair discrimination between customers, issuers, brokers or dealers.⁷⁰⁴ Rule 610(d) is consistent with that statutory framework as it provides members and their customers with more certainty and transparency at the time of trade when exchange transaction pricing may be relevant to, and impactful on, the broker-dealer’s order routing decision. New Rule 610(d) is narrowly tailored to improve certainty and transparency regarding exchange fees and rebates within the current regulatory framework.

One commenter stated that the proposal might make it more difficult

computable at the time of the trade but questioning what, if any, impact this will have on complexity of existing pricing tiers and expressing preference that the Commission adopt a “more drastic policy change.”); IEX Letter I at 6.

⁶⁹² RBC Letter at 5. See also Citigroup Letter at 6; Proof Letter at 1-2.

⁶⁹³ IEX Letter I at 29. See also Citigroup Letter at 6; John Ramsay, Chief Market Policy Officer, Investors Exchange LLC, dated Sept. 20, 2023 (“IEX Letter II”) at 4; Healthy Markets Letter II at 3-6. However, not all commenters agree that volume-based fee/rebate tiers are anticompetitive. See, e.g., Cboe Letter III at 6-7 (arguing “volume-based tiers do not restrain trade or represent a burden on competition . . . By contrast, limiting volume-based rebate tiers would in fact harm competition and disadvantage the very small and mid-sized brokers who support this myth.”).

⁶⁹⁴ BMO Letter at 4. See also Fidelity Letter at 15; Proof Letter at 1-2.

⁶⁹⁵ Pragma Letter at 7-8.

⁶⁹⁶ However, a broker-dealer may choose not to offer pass-through of fees, rebates and other forms of remuneration to its customers or may choose not to pass through the entirety of the incentive it receives, or the customer may not want or be able to accommodate such pass-throughs. In these cases, a conflict of interest would continue to exist between the broker-dealer and its customer when the broker-dealer routes the customer’s order for execution based on the broker-dealer’s economic benefit from its routing decision. Notwithstanding, even if pass-through of fees, rebates and other forms of remuneration to customers does not happen, Rule 610(d) will provide certainty regarding the applicable fee/rebate at the time of execution, which will facilitate a customer’s ability to evaluate their broker’s routing decisions and could improve broker-dealer accountability, provide greater transparency regarding executions and lead to improved order execution for customers. See *infra* section VII.D.3.

⁶⁹⁷ See *id.*

⁶⁹⁸ See *infra* section VII.D.3.

⁶⁹⁹ Nasdaq Letter I at 2, 31-32.

⁷⁰⁰ See Proposing Release, *supra* note 11, at 80287. If an ATS or OTC market maker displayed a protected quotation, its fees would be subject to the access fee caps under rule 610(c). However, exchange fees and the fees of non-exchange trading centers are treated very differently under the Federal securities laws. For example, one of the distinguishing features of registered national securities exchanges is that—unlike non-exchange trading centers—their fees are subject to the principles-based standards set forth in the Exchange Act, as well as the rule filing requirements thereunder.

⁷⁰¹ 15 U.S.C. 78(f)(b) and (s)(b).

⁷⁰² 17 CFR 240.19b-4.

⁷⁰³ 17 CFR 240.19b-4(m)(1).

⁷⁰⁴ 15 U.S.C. 78f(b)(4) and (5). See also Proposing Release, *supra* note 11, at 80287.

for smaller broker-dealers to compete against established firms because “participation in the exchanges’ growth programs” might become more expensive in the initial month of participation and “limit exchanges’ ability to incent market makers and other participants to quote at the NBBO and to do so in a large number of securities, including thinly-traded securities.”⁷⁰⁵ The commenter did not provide detail as to how these impacts would arise, but requested the Commission to “exempt growth programs and special pricing programs that reward market makers and other participants for quoting at the NBBO and providing market quality” from the requirements of Rule 610(d).⁷⁰⁶

Finally, some commenters did not support proposed Rule 610(d) because they stated it would negatively impact the ability to incentivize liquidity provision, “disrupt[] existing economic incentives without justification,”⁷⁰⁷ add “an unnecessary layer of complexity,”⁷⁰⁸ and inappropriately “wade into the business of telling private companies how to charge their customers.”⁷⁰⁹ One commenter stated that “existing fee constructs such as volume-based pricing tiers are important tools that allow exchanges to compete with one another and with non-exchanges.”⁷¹⁰ This commenter further stated that volume-based tiers are entirely consistent with the Exchange Act and vital tools exchanges use to “incentivize greater participation and improve liquidity and market quality.”⁷¹¹ Finally, one commenter stated that the Commission “include[d] no data [] showing this change would cure any harm, nor does it claim any

anticipated benefits that might flow from this change.”⁷¹²

The new rule does not prohibit exchange liquidity provision incentives nor add complexity as suggested by some commenters. It instead shifts the time of calculating fees or rebates so that investors and other market participants are informed, when placing an order, of the amount of the fee or rebate that will be assessed. Rule 610(d) does not alter an exchange’s ability to offer incentive programs based on volume tiers or any another metric; rather it will provide prospective certainty regarding what fee/rebate the market participant will incur/earn by achieving the requisite benchmark. Therefore, exceptions for liquidity provision incentives are not appropriate or necessary. Further, Rule 610(d) does not require exchange fees, rebates or other remuneration to be based on activity from a specific measurement period provided the metric used can be achieved prior to the time of execution, nor does it impose any obligations or additional costs on market participants to perform any new calculations, make new projections or forecasts, or undertake any new responsibilities. The Commission is not requiring market participants to undertake any obligations regarding the calculation of the applicable fee/rebate. Instead, Rule 610(d) will facilitate a market participant’s ability to know the amount of the fee/rebate based on historical (rather than future) volume, so that it can understand how a volume-based fee/rebate will apply at the time of execution.⁷¹³ Rule 610(d) will allow market participants to calculate the amount of the fee/rebate using data available at the time of execution rather than have to forecast or estimate the cost of their transaction. As discussed below, this certainty and transparency regarding the fee and rebate that will apply to a particular transaction will benefit market participants and improve market quality.⁷¹⁴

Further, one commenter requested the Commission withdraw proposed Rule 610(d) in light of its subsequent

proposed rule addressing volume-based transaction pricing because the proposals are “inextricably linked” and “so contradictory and indeterminate that the public has not had a reasonable opportunity to comment on what the Commission is actually proposing.”⁷¹⁵

The Commission disagrees. The Fee Tiers Proposal remains a proposal. As explained throughout this section, the increased certainty and transparency Rule 610(d) will require will provide benefits to investors and other market participants on its own. Further, the two proposals are not contradictory because Rule 610(d) applies to all exchange fees and rebates not just those that are volume-based, whereas the Fee Tiers Proposal specifically concerns volume-based pricing and agency-related orders as well as a disclosure requirement that would be fully compatible with Rule 610(d). Accordingly, both proposals are compatible in their different scopes, objectives, and application and so are not in conflict. In addition, Rule 610(d) is not indeterminate but rather straightforward; the public has had the opportunity to comment and many have, in fact, so commented.

Another commenter stated the Commission should revise proposed Rule 610(d) to require fees and rebates to be known “before the time of execution” and require “all affected trading venues to publish their fees in machine-readable format” to allow market participants to more readily consume a trading venue’s fee schedule and update participant systems.⁷¹⁶ Implicit in the requirement that fees/rebates be determinable at the time of execution is use of historical, rather than future, volume to benchmark any qualifying criteria for a particular fee/rebate and thus the fee/rebate would be calculatable or determinable before the time of execution. For a fee to be determinable at the time of execution, it must be ascertainable before or contemporaneously with the execution. Otherwise, the purpose of Rule 610(d)—to provide certainty and transparency regarding what fee/rebate will apply at the time of execution—would be undermined. No change or clarification of Rule 610(d) is necessary because implicit in the requirement that fees/

⁷⁰⁵ Nasdaq Letter I at 33.

⁷⁰⁶ *Id.* at 33.

⁷⁰⁷ Choe Letter II at 9–10 (stating that removing incentives provided by exchange rebate tiers would drive liquidity off-exchange and negatively impact exchange liquidity provision). *See also* Data Boiler Letter I at 28–29 (stating that determinable requirement will lead to increased costs that will be passed along to customers as higher commissions or reduced services and could lead to higher barriers to entry because the requirement may cause a “direct hit to broker-dealers’ bottom line” which will force them to “find alternative ways to squeeze, exploit, or rent seek to cover their losses” and urging adoption of “Copyright Licensing mechanism” instead.).

⁷⁰⁸ Virtu Letter II at 9–10 (stating the “effort required to understand the volume fee system, forecast volume fees for an upcoming period, and confirm that fees are indeed being calculated appropriately will especially disadvantage smaller brokers, who typically have less resources . . . for needless work such as this.”).

⁷⁰⁹ Virtu Letter II at 9.

⁷¹⁰ Choe Letter III at 2.

⁷¹¹ Choe Letter III at 6–7.

⁷¹² Virtu Letter III at 9–10.

⁷¹³ Implicit in the use of historical rather than future volume is that market participants will know the amount of the fee/rebate that will apply at the time of the execution. As discussed above, exchange fees are subject to the requirements of the Exchange Act and the rules thereunder, which require, among other things, that every exchange post and maintain a current and complete version of the entirety of each and every fee, due, and charge assessed by an exchange. Because information necessary to calculate the amount of the fee or rebate will be knowable at the time of execution, Rule 610(d) will provide market participants with the ability to determine the fee or rebate due at the time of execution.

⁷¹⁴ *See infra* section VII.D.3.

⁷¹⁵ Citadel Letter II at 6 (stating that comments on Rule 610(d) were provided “on the basis that volume-based fee tiers were explicitly not being prohibited” and requesting the Commission “propose and publish an analysis assessing the cumulative effect of the two proposals that allows commenters to consider the broader implications (and the Commission’s analysis of those implications) of prohibiting volume-based transaction pricing for certain orders.”).

⁷¹⁶ FIA PTG Letter II at 4. *See also* Citadel Letter I at 25; Healthy Markets Letter I at 26.

rebates be determinable at the time of execution is the ability to calculate the fee/rebate prior to execution.

Finally, new Rule 610(d) enhances transparency regarding exchange fees and rebates but does not require a specific format for publication of the information. Exchange fees are required to be posted on exchange websites⁷¹⁷ and, as is true today, if market participants need a specific format, they can make such requests to the exchanges.

V. Final Rule—Transparency of Better Priced Orders

The Commission, among other things, adopted new definitions of round lot⁷¹⁸ and odd-lot information⁷¹⁹ under the MDI Rules to enhance the transparency for investors and other market participants of quotes and orders in NMS stocks that have better prices than what has been provided in SIP data.⁷²⁰ In the Proposing Release, the Commission proposed: (1) to accelerate the implementation of these two definitions adopted under the MDI Rules, (2) an amendment to the definition of “regulatory data” in Rule 600(b)(78)(iv),⁷²¹ (3) to require each exclusive SIP to represent quotation sizes in consolidated information in terms of the number of shares, rounded down to the nearest multiple of a round lot, and (4) to amend the definition of odd-lot information to include a best odd-lot order. As discussed in detail below, the Commission is: (1) adopting an accelerated implementation schedule for the round lot and odd-lot information definitions, with modifications to the proposed implementation schedule; (2) adopting the amendment to the definition of “regulatory data”, as proposed;⁷²² (3) requiring each exclusive SIP to represent quotation sizes in consolidated information in terms of the number of shares, rounded down to the nearest multiple of a round lot, as proposed; and (4) modifying the Commission’s approach in the Proposing Release by adopting

amendments to the round lot definition that will require less frequent round lot adjustments—*i.e.*, semiannually, rather than monthly—by defining a round lot “Evaluation Period” and by specifying an operative period.⁷²³ In addition, the Commission is adopting the best odd-lot order data element, as proposed.

A. Background

The MDI Rules expanded NMS information and established a decentralized consolidation model, pursuant to which competing consolidators will eventually replace the exclusive SIPs for the collection, consolidation, and dissemination of NMS information.⁷²⁴ The Commission adopted a phased transition plan for the MDI Rules,⁷²⁵ which has been delayed.⁷²⁶ Accordingly, NMS information is currently collected, consolidated and disseminated within the national market system by the exclusive SIPs as SIP data.⁷²⁷

Because the MDI Rules are not yet implemented, NMS stock quotation information that is included in SIP data is provided in round lots, as defined in exchange rules,⁷²⁸ and for most NMS stocks a round lot is defined as 100 shares.⁷²⁹ Under Rule 600(b)(93), as adopted by the MDI Rules,⁷³⁰ round lot sizes are assigned to each NMS stock based on its average closing price and those NMS stocks that have an average closing price in the prior month greater than \$250.00 will be assigned a round lot in a size that is less than 100 shares.

Moreover, because the MDI Rules are not yet implemented, information about orders in NMS stocks that have a size less than a round lot, *i.e.*, odd-lot orders, is available on individual exchange proprietary data feeds, and market participants interested in quotation information for individual odd-lot orders must purchase these proprietary feeds.⁷³¹ SIP data includes odd-lot transaction information but does not include odd-lot quotation information, except to the extent that odd-lot orders

are aggregated into round lots pursuant to exchange rules.⁷³²

The MDI Rules were designed to increase transparency into, among other things, the best priced quotations available in the market.⁷³³ Under the MDI Rules’ phased transition plan, the round lot and odd-lot information definitions were scheduled to be implemented during later phases in order to avoid imposing costs on the exclusive SIPs, which will be retired upon full implementation of the MDI Rules.⁷³⁴ Due to the delays in the MDI Rules’ implementation, as discussed in the Proposing Release,⁷³⁵ the Commission is adopting an accelerated implementation schedule, with some modifications from the proposal, so that market participants, including investors, will be provided with the enhanced transparency benefits earlier than anticipated in the MDI Rules.

B. Final Rule—Round Lots

The Commission is amending the implementation schedule for the round lot definition that was adopted in the MDI Rules. The round lot definition will be implemented on the first business day of November 2025. This adopted compliance date is modified from the proposal, which required compliance with the round lot definition 90 days from **Federal Register** publication of any Commission adoption of an earlier implementation of the round lot definition.⁷³⁶ The Commission has provided more time than what was proposed so that market participants can update and modify their systems.⁷³⁷ However, the adopted compliance date still accelerates the time by which the definition will be implemented as compared to the preexisting schedule adopted in the MDI Rules.⁷³⁸

In addition, the Commission is amending the round lot definition to include a new definition for an “Evaluation Period” and a provision specifying the operative dates for round lot assignments. These amendments will align the dates for assigning round lots

⁷¹⁷ See rule 19b-4(m)(1). 17 CFR 240.19b-4(m)(1).

⁷¹⁸ The MDI Rules adopted the definition of round lot in rule 600(b)(82). This provision was subsequently renumbered to Rule 600(b)(93) by the Rule 605 Amendments. 17 CFR 242.600(b)(93); Rule 605 Amendments, *supra* note 10.

⁷¹⁹ The MDI Rules adopted the definition of odd-lot information in rule 600(b)(59). This provision was subsequently renumbered to Rule 600(b)(69) by the Rule 605 Amendments. 17 CFR 242.600(b)(69); Rule 605 Amendments, *supra* note 10.

⁷²⁰ See MDI Adopting Release, *supra* note 10.

⁷²¹ See *supra* note 320.

⁷²² The Commission is adopting this amendment to the definition of regulatory data in Rule 600(b)(89)(iv). See *supra* note 320.

⁷²³ The Commission is not changing the calculation used to assign round lots or the round lot tiers in the round lot definition adopted in the MDI Rules.

⁷²⁴ See MDI Adopting Release, *supra* note 10.

⁷²⁵ See Proposing Release, *supra* note 11, at 80295 (describing the phased transition plan for the MDI Rules).

⁷²⁶ See *supra* notes 74–78 and accompanying text.

⁷²⁷ See *supra* notes 63–65 and accompanying text for a description of SIP data.

⁷²⁸ See *supra* note 66.

⁷²⁹ See *supra* note 67.

⁷³⁰ See *supra* note 718.

⁷³¹ See *supra* notes 67–68 and accompanying text.

⁷³² See MDI Adopting Release, *supra* note 10, at 18727.

⁷³³ MDI Adopting Release, *supra* note 10, at 18601–02, 18617; see also 17 CFR 242.600(b)(93).

⁷³⁴ See MDI Adopting Release, *supra* note 10, at 18700–01; see also Proposing Release, *supra* note 11, at 80295, 80298–99.

⁷³⁵ See Proposing Release, *supra* note 11, at 80295.

⁷³⁶ See Proposing Release, *supra* note 11, at 80300–01.

⁷³⁷ See *infra* section VI.C.

⁷³⁸ See Proposing Release, *supra* note 11, at 80295; see also *supra* notes 74–78 and accompanying text.

to the dates for assigning minimum pricing increments under Rule 612.⁷³⁹

Finally, the Commission is also adopting, as proposed, the amendment to the “regulatory data” definition in Rule 600(b)(89)(iv).⁷⁴⁰

1. Round Lot Definition

Rule 600(b)(93), as adopted by the MDI Rules,⁷⁴¹ defines a round lot for NMS stocks that have an average closing price on the primary listing exchange during the prior calendar month of: (1) \$250.00 or less per share as 100 shares; (2) \$250.01 to \$1,000.00 per share as 40 shares; (3) \$1,000.01 to \$10,000.00 per share as 10 shares; and (4) \$10,000.01 or more per share as 1 share.⁷⁴² For any new NMS stock for which the prior calendar month’s average closing price is not available, a round lot is 100 shares. As a result of the MDI Rules’ round lot definition, each exchange’s BBO and the NBBO for an NMS stock could be based upon smaller, potentially better priced orders,⁷⁴³ which would improve transparency

regarding the better priced quotations available in the market and the ability of market participants to access these quotations.⁷⁴⁴

In the MDI Adopting Release, the Commission analyzed data from May 2020 on the portion of all corporate stock and ETF volume executed on an exchange, transacted in a quantity less than 100 shares, at a price better than the prevailing NBBO, occurring in a quantity that would be defined as a round lot under the MDI Rules.⁷⁴⁵ The Proposing Release repeated this analysis using data for the dates March 25–31, 2022.⁷⁴⁶ Both analyses demonstrated that the round lot definition adopted in the MDI Rules will capture significant percentages of better priced odd-lot orders for NMS stocks with an average closing price greater than \$250.00.

The Commission has updated this analysis from the Proposing Release with data from October 2023. As discussed below, upon further consideration and evaluation of comments, the Commission is adopting

modifications to the round lot definition to require less frequent round lot adjustments so that they occur on a semiannual basis, rather than on a monthly basis and the calculation of the average closing price on the primary listing exchange will be based on a one-month “Evaluation Period.”⁷⁴⁷ The updated analysis accounts for the modifications to the round lot definition and is based on data from October 23–27, 2023, using a March 2023 Evaluation Period to be consistent with the adopted rule.⁷⁴⁸ The updated analysis demonstrates that the round lot definition, as amended, will capture significant percentages of better priced odd-lot orders.

Tables 1 and 2 examine the portion of all corporate stock and ETP share volume and trades executed on an exchange, transacted in a quantity less than 100 shares, at a price better than the prevailing NBBO, occurring in a quantity defined as a round lot under the MDI Rules, as amended by the Commission.

TABLE 1

Round lot tier	Round lot size (shares)	Percent ¹
\$0–\$250.00	100	0.00
\$250.01–\$1,000.00	40	52.89
\$1,000.01–\$10,000.00	10	76.89
\$10,000.01 or more	1	100.00

¹ Portion of all corporate stock and ETP share volume executed on an exchange, transacted in a quantity less than 100 shares, at a price better than the prevailing NBBO, occurring in a quantity that would be defined as a round lot under the MDI Rules as amended, for Oct. 23–27, 2023.

Source: Equity consolidated data feeds (CTS and UTDF), as collected by MIDAS; NYSE Daily TAQ.

⁷³⁹ See *supra* section III.C.8.

⁷⁴⁰ See *supra* note 320.

⁷⁴¹ See *supra* note 718.

⁷⁴² 17 CFR 242.600(b)(93). The definition of regulatory data adopted in the MDI Rules also requires that a round lot indicator be included in NMS information so that market participants will know the size of a round lot for each NMS stock. The primary listing exchange must provide, among other things, an “indicator of the applicable round lot size” to competing consolidators and self-aggregators. 17 CFR 242.600(b)(89); MDI Adopting Release, *supra* note 10, at 18634. In addition, the MDI Rules require competing consolidators to represent quotation sizes for certain core data elements in terms of the number of shares, rounded down to the nearest multiple of a round lot. 17 CFR 242.600(b)(26)(iii); MDI Adopting Release, *supra* note 10, at 18615.

⁷⁴³ Orders currently defined as odd-lots often reflect superior pricing. See MDI Adopting Release, *supra* note 10, at 18616 n.241 (describing analysis of data from May 2020 that found that “approximately 45% of all trades executed on exchange and approximately 10% of all volume executed on exchange in corporate stocks and ETFs occurred in odd-lot sizes (*i.e.*, less than 100 shares),

and 40% of those odd-lot transactions (representing approximately 35% of all odd-lot volume) occurred at a price better than the NBBO”). More recent data and updated analyses confirm that these pricing patterns in odd-lot trading have continued. See Proposing Release, *supra* note 11, at 80296.

⁷⁴⁴ See MDI Adopting Release, *supra* note 10, at 18601, 18615, 18742, 18744–45. In the MDI Proposing Release, the Commission explained the importance of increasing transparency into odd-lot quotation information by demonstrating that odd-lot transactions make up a significant proportion of transaction volume in NMS stocks (including ETPs), through provision of the daily exchange odd-lot rate (*i.e.*, the number of exchange odd-lot trades as a proportion of the number of exchange trades) for corporate stocks and ETPs in 2018 and in June 2019. See Securities Exchange Act Release No. 88216 (Feb. 14, 2020), 85 FR 16726, 16739 (Mar. 24, 2020) (“MDI Proposing Release”). For this release, Commission staff repeated this analysis to determine the daily exchange odd-lot rate for 2023. Based on data from the Commission’s MIDAS analytics tool, the daily exchange odd-lot rate for all corporate stocks ranged from approximately 61% to 70% of trades and the daily exchange odd-lot rate for all ETPs ranged from 31% to 42% of

trades in 2023. Accordingly, accelerating the implementation of the round lot and odd-lot information definitions will increase the pre-trade transparency of better priced orders that are prevalent in the national market system.

⁷⁴⁵ See MDI Adopting Release, *supra* note 10, at 18612 (table 1).

⁷⁴⁶ See Proposing Release, *supra* note 11, at 80296–97 (tables 1 and 2).

⁷⁴⁷ See *infra* section V.B.3.b.iv. Amended Rule 600(b)(93)(iii) defines the Evaluation Period as (A) all trading days in Mar. for the round lot assigned on the first business day in May and (B) all trading days in Sept. for the round lot assigned on the first business day of Nov. during which the average closing price of an NMS stock on the primary listing exchange shall be measured by the primary listing exchange to determine the round lot for each NMS stock.

⁷⁴⁸ See *infra* section V.B.3.b.iv. The analysis used the average closing price of the NMS stocks on their primary listing exchange for all trading days in Mar. 2023 and used those average prices to determine the size of the round lot for each stock in the universe. Those round lots were then applied to the analysis of the stocks’ trading data for Oct. 23–27, 2023.

TABLE 2

Round lot tier	Round lot size (shares)	Percent ¹
\$0–\$250.00	100	0.00
\$250.01–\$1,000.00	40	13.79
\$1,000.01–\$10,000.00	10	26.63
\$10,000.01 or more	1	100.00

¹ Portion of all corporate stock and ETP trades executed on an exchange, transacted in a quantity less than 100 shares, at a price better than the prevailing NBBO, occurring in a quantity that would be defined as a round lot under the MDI Rules as amended, for Oct. 23–27, 2023. Source: Equity consolidated data feeds (CTS and UTDF), as collected by MIDAS; NYSE Daily TAQ.

The Proposing Release also included the results of a simulation conducted by the Commission, using exchange direct feed data from MIDAS for every trading day in March 2022, to create a mockup competing consolidator feed that included quotation information for a sample of NMS stocks priced at or over \$250.01 using the priced-based round lot sizes adopted in the MDI Rules' round lot definition as opposed to the round lot sizes that are defined in current exchange rules (typically 100 shares).⁷⁴⁹ Snapshots of this simulated feed were compared against snapshots of the exclusive SIP feed for the sample of NMS stocks at the same point in time. For two of the three round lot price tiers above \$250.01, the simulated competing consolidator feed showed better prices, on average, than the exclusive SIP feed.⁷⁵⁰

The Commission has updated this analysis using exchange direct feed data from MIDAS for every trading day in November 2023 and to account for the modifications to the round lot definition.⁷⁵¹ Like the prior analysis, the Commission conducted a simulation of

a competing consolidator feed that provides quotation information for a sample of NMS stocks priced at or over \$250.01 using the priced-based round lot sizes adopted in the MDI Rules' round lot definition as opposed to the round lot sizes that are defined in current exchange rules (typically 100 shares).⁷⁵² Snapshots of this simulated feed were compared against snapshots of the exclusive SIP feed for that NMS stock at the same point in time. For two of the three price tiers and corresponding round lot sizes, the simulated feed showed better prices, on average, than the exclusive SIP feed.⁷⁵³ For stocks priced between \$250.01 and \$1,000.00 per share, which will have a round lot size of 40 under the round lot definition, the price reflected in the simulated competing consolidator feed was better than the exclusive SIP feed 31.93% of the time and worse less than .1% of the time. For stocks priced between \$1,000.01 and \$10,000.00 per share, which will have a round lot size of 10 under the round lot definition, the price reflected in the simulated competing consolidator feed was better than the exclusive SIP feed 80.77% of the time and worse less than .2% of the time. The updated analysis continues to demonstrate that the simulated competing consolidator feed, which reflects the round lot sizes adopted in the MDI Rules' round lot definition, provides better prices than the exclusive SIP feeds, which reflect the prior round lot size, in NMS stocks priced over \$250.01, even with the modifications to the round lot definition.⁷⁵⁴

⁷⁴⁹ See *supra* note 66.

⁷⁵⁰ See Proposing Release, *supra* note 11, at 80297 (stating, “[f]or stocks priced between \$250.01 and \$1,000.00 per share, which will have a round lot size of 40 under the round lot definition, the price reflected in the simulated competing consolidator feed was better than the exclusive SIP feed 21.47% of the time and worse less than .1% of the time. For stocks priced between \$1,000.01 and \$10,000.00 per share, which will have a round lot size of 10 under the round lot definition, the price reflected in the simulated competing consolidator feed was better than the exclusive SIP feed 64.67% of the time and worse less than .1% of the time.”). For the third round lot price tier above \$250.01, for stocks priced \$10,000.01 or more, the Proposing Release stated that there was one stock that was priced over \$10,000 per share and was already quoted in one-share round lots on the exclusive SIP feed; therefore, the simulated feed and exclusive SIP feed showed the same prices for the stock. *Id.* at 80297 n.369.

⁷⁵¹ The Commission assigned a sample of NMS stocks to a round lot tier based upon their average closing prices on the primary listing exchange during Sept. 2023 to account for the adopted definition of Evaluation Period under the round lot definition, which states that the Evaluation Period for the round lot assigned on the first business day of Nov. would be all trading days in Sept. See amended Rule 600(b)(93)(iii).

⁷⁵² See *supra* note 66.

⁷⁵³ In the third price tier, which defines a round lot for stocks priced \$10,000.01 or more per share as an order for the purchase or sale of an NMS stock of one share, only one stock, which is already quoted in one share round lot on the exclusive SIP feed, was priced over \$10,000 per share, so the simulated feed and exclusive SIP feed showed the same prices for this stock.

⁷⁵⁴ See *supra* note 750.

2. Proposed Acceleration of Round Lot Definition

The Commission proposed to accelerate the implementation of the round lot definition set forth in Rule 600(b)(93).⁷⁵⁵ Specifically, the Commission proposed to require compliance with the round lot definition 90 days from **Federal Register** publication of any Commission adoption of an earlier implementation of the round lot definition.⁷⁵⁶

In the MDI Adopting Release, the Commission stated that “sequencing [round lot implementation] after the parallel operation period is important to avoid either: (1) potential confusion and market disruption that could result from two different round lot structures operating at the same time; or (2) imposing reprogramming costs on the exclusive SIPs for a limited time period prior to their retirement.”⁷⁵⁷ However, because full implementation of the MDI Rules as adopted pursuant to the phased transition plan⁷⁵⁸ likely will not occur until at least two years after new proposals to amend the effective national market system plan(s) are developed, filed and approved by the Commission,⁷⁵⁹ the Commission

⁷⁵⁵ See *supra* note 718.

⁷⁵⁶ See Proposing Release, *supra* note 11, at 80300.

⁷⁵⁷ MDI Adopting Release, *supra* note 10, at 18701. The Commission stated that “the consolidated market data products offered by competing consolidators during the initial parallel operation period would be based on the current definition of round lot.” *Id.* at 18700. However, because the Commission is accelerating the implementation of the round lot definition, the exclusive SIPs will be providing SIP data that reflects the new round lot sizes during the initial parallel operation period. Further, the acceleration of the implementation of the round lot definition will result in its use during the parallel operation period by both the exclusive SIPs and competing consolidators. See *supra* note 73 for a discussion of the parallel operation period; *infra* section VI.C for a discussion of the modified compliance deadline.

⁷⁵⁸ See *supra* notes 73–78 and accompanying text.

⁷⁵⁹ See Proposing Release, *supra* note 11, at 80295. See also MDI Adopting Release, *supra* note 10, at 18699–701. The two-year estimated timeframe includes the implementation of the round lot definition, which was scheduled to occur at the end of the transition plan.

proposed to amend the phased transition schedule of the MDI Rules to allow the benefits of the round lot definition to be made available to investors sooner.⁷⁶⁰ The benefits identified in the MDI Adopting Release justify the costs of accelerating the implementation of the round lot definition in this rulemaking.⁷⁶¹

Further, as part of accelerating the implementation of the round lot definition, the Commission proposed to amend the definition of “regulatory data” in Rule 600(b)(78) to require the indicator of the applicable round lot size to be provided to the exclusive SIPs for collection and dissemination.⁷⁶² The preexisting definition of “regulatory data” required the primary listing exchange for an NMS stock to provide to competing consolidators and self-aggregators an indicator of applicable round lot size.⁷⁶³ The Commission proposed to add new paragraph (iv) to the definition of “regulatory data” to require the primary listing exchanges to also make the indicator available to the exclusive SIPs.⁷⁶⁴ Referencing the round lot indicator adopted with regard to competing consolidators in the MDI Rules, the Commission stated that such an indicator will “help market participants ascertain the applicable round lot size for each NMS stock on an ongoing basis”⁷⁶⁵ and “reduce confusion as market participants adjust to the new round lot sizes.”⁷⁶⁶ For these same reasons, the Commission proposed to require this indicator to be provided to the exclusive SIPs for collection and dissemination.⁷⁶⁷

3. Comments and Response

a. Comments Supporting the Proposed Change

The Commission received comments in support of the proposed acceleration of the implementation of the round lot definition from individuals,⁷⁶⁸ firms,⁷⁶⁹ exchanges,⁷⁷⁰ and associations.⁷⁷¹ Several commenters supported the proposed acceleration of the implementation of the round lot definition because they said that it would improve transparency⁷⁷² and enhance price discovery.⁷⁷³ Several commenters stated that the proposed change would result in more accurate prices,⁷⁷⁴ allow investors to make more informed trading decisions,⁷⁷⁵ improve execution quality,⁷⁷⁶ and reduce transaction costs and inefficiencies.⁷⁷⁷ One commenter supported the proposed acceleration of the

implementation of the round lot definition because the commenter said it would narrow the NBBO spread by incorporating current odd-lot interest and “mak[ing] the notional size associated with the NBBO more uniform across stock price levels.”⁷⁷⁸ Another commenter supported the proposal because the round lot definition “would enhance the accuracy of the NBBO for high-priced stocks.”⁷⁷⁹ Some commenters supported the proposed acceleration of the implementation of the round lot definition because they stated that this change would restore public trust,⁷⁸⁰ or because this change and the dissemination of odd-lot information by the exclusive SIPs would enhance reporting efficiency and reduce delays.⁷⁸¹ Commenters also supported the proposed acceleration of the implementation of the round lot definition because they stated that the round lot definition would result in lot sizes that would better suit the needs of investors.⁷⁸²

In the MDI Adopting Release, as well as the Proposing Release, the Commission described the benefits of the adopted round lot definition.⁷⁸³ The Commission stated that the new round lot definition will “narrow NBBO spreads for most stocks with prices greater than \$250,”⁷⁸⁴ improve transparency and “the comprehensiveness of and usability of core data, facilitate the best execution of customer orders, and reduce information asymmetries.”⁷⁸⁵ The Commission also stated that the reduced round lot size for high priced NMS stocks would “better ensure the display and accessibility of significant liquidity for high-priced stocks.”⁷⁸⁶ Some commenters supported the proposed acceleration of the implementation of the round lot definition but stated that more time than proposed was needed

⁷⁶⁰ See Proposing Release, *supra* note 11, at 80300–01.

⁷⁶¹ See *infra* section VII.D.5.

⁷⁶² Under the MDI Rules, the definition of regulatory data requires the primary listing exchange to make an indicator of the applicable round lot size to competing consolidators and self-aggregators. See Rule 600(b)(89)(i)(E), 17 CFR 242.600(b)(89)(i)(E). See also *supra* note 320.

⁷⁶³ 17 CFR 242.600(b)(89)(i)(E).

⁷⁶⁴ See Proposing Release, *supra* note 11, at 80299.

⁷⁶⁵ See Proposing Release, *supra* note 11, at 80299. For more details, see MDI Proposing Release, *supra* note 744, at 16762.

⁷⁶⁶ See Proposing Release, *supra* note 11, at 80299; MDI Adopting Release, *supra* note 10, at 18619.

⁷⁶⁷ See Proposing Release, *supra* note 11, at 80299. As discussed below, since the MDI Rules already require the primary listing exchanges to provide an indicator of the applicable round lot size to competing consolidators and self-aggregators, the incremental cost of providing this indicator to the two exclusive SIPs should be low. See *infra* section VIII.G.

⁷⁶⁸ See Comment Letters Type E, F, G, H, I, J, K, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>; see, e.g., Letters from Aron Tastensen (Feb. 23, 2023); Aswin Joy (Mar. 7, 2023); Abraham (Mar. 14, 2023); Andrew A. (Mar. 19, 2023).

⁷⁶⁹ See, e.g., XTX Letter at 5; BMO Letter at 2; Schwab Letter II at 36; Citigroup Letter at 3; Hudson River Letter at 2; Fidelity Letter at 9, 16; BlackRock Letter at 11–12; Vanguard Letter at 2.

⁷⁷⁰ See, e.g., NYSE Letter I at 7; Nasdaq Letter I at 3; MEMX Letter at 2, 4, 5–6; Cboe Letter II at 2, 10; IEX Letter I at 6, 30; Cboe Letter III at 10 and n.18. The Commission also received comment letters submitted by both exchanges and firms that supported the accelerated implementation of the round lot definition. See Cboe, State Street, et al. Letter at 2; NYSE, Schwab, and Citadel Letter at 2.

⁷⁷¹ See, e.g., MFA Letter at 3, 13–14; Better Markets Letter I at 16–17; SIFMA AMG Letter I at 9; CCMR Letter at 22; FIA PTG Letter II at 4–5; ICI Letter I at 6–7; SIFMA Letter II at 34, 44; STA Letter at 8. See also AIMA Letter at 3 (stating that the Commission should prioritize the implementation of the round lot definition and the Rule 605 Proposal).

⁷⁷² See Comment Letter Type E, I, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>; see, e.g., Letters from Bill Gilbert (Mar. 7, 2023); Richard Pasquali (Mar. 16, 2023); IEX Letter I at 6; MFA Letter at 13–14; XTX Letter at 5; Better Markets Letter I at 16–17; BlackRock Letter at 11–12 (stating that accelerated implementation of the round lot and the odd-lot information definitions would increase pre-trade transparency for investors); FIA PTG Letter II at 4; Hudson River Letter at 2; ICI Letter I at 6.

⁷⁷³ See, e.g., XTX Letter at 5 (also referring to the proposed publication on the exclusive SIPs of odd-lots priced better than the NBBO); Cboe Letter II at 10; Cboe Letter I at 10 (stating that the proposed acceleration of the round lot definition and the display of odd-lot orders would improve price discovery and reduce spreads); ICI Letter I at 6.

⁷⁷⁴ See, e.g., IEX Letter I at 6 (referring to the proposed acceleration of the implementation of the round lot definition as well as the display of odd-lot orders).

⁷⁷⁵ See, e.g., MFA Letter at 13–14; Better Markets Letter I at 16–17; FIA PTG Letter II at 4.

⁷⁷⁶ See, e.g., MFA Letter at 13–14; Better Markets Letter I at 16–17; BlackRock Letter at 11 (stating that accelerated implementation of the round lot and the odd-lot information definitions would result in enhanced execution quality for investors).

⁷⁷⁷ See FIA PTG Letter II at 4.

⁷⁷⁸ See Hudson River Letter at 2.

⁷⁷⁹ See CCMR Letter at 22.

⁷⁸⁰ See, e.g., Letters Type E, G, J, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>; see also e.g., Letters from Christopher Nieto (Mar. 31, 2023); Michael Montalban (Mar. 31, 2023).

⁷⁸¹ See, e.g., Letter Type K, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>.

⁷⁸² See, e.g., IEX Letter I at 30; BlackRock Letter at 11 (stating that the proposed acceleration of the implementation of both the round lot and odd-lot definitions would increase the usefulness of the exclusive SIPs because of the prevalence of current odd-lot sizes); MEMX Letter at 4; STA Letter at 8.

⁷⁸³ See Proposing Release, *supra* note 11, at 80296.

⁷⁸⁴ *Id.*

⁷⁸⁵ *Id.*

⁷⁸⁶ *Id.*

for compliance.⁷⁸⁷ As discussed later in this release, the Commission is providing more time to implement the round lot definition than the 90-days that was proposed for implementation.⁷⁸⁸

One commenter supported the proposed acceleration of the implementation of the round lot definition subject to “regulatory and industry-wide education to investors on the changes.”⁷⁸⁹ As with many regulatory changes, investor education and notification may be useful so that investors better understand the implications of the size of their orders.

b. Comments Objecting to the Proposed Change

The Commission also received comments that raised objections to specific aspects of the proposed acceleration of the implementation of the round lot definition. These comments are addressed below.

i. Comments on the Interaction Between the Round Lot Definition and the Proposed Minimum Pricing Increments

The Commission received comments that expressed concern about the potential impact of both the implementation of the round lot definition and the proposed changes to the minimum pricing increments.⁷⁹⁰ Specifically, some commenters raised concerns about the potential impact of both proposed changes on liquidity and NBBO depth.⁷⁹¹ One commenter stated that smaller round lot sizes would make the NBBO “less robust, as a smaller amount of liquidity would now establish the NBBO benchmark,” compounded by the proposed reduction in quoting tick sizes that would require liquidity to be dispersed in finer pricing increments.⁷⁹² One commenter stated that the proposed minimum pricing increments and “the round lot reforms” would be duplicative because they would both result in narrow spreads.⁷⁹³ In addition, one commenter stated that the round lot definition and proposed minimum pricing increments “would significantly reduce transparency on the

SIP and force more participants to purchase costly direct feeds to maintain the same level of transparency of liquidity.”⁷⁹⁴

Although the Commission agrees that both the round lot definition adopted in the MDI Adopting Release and the amended minimum pricing increments will impact the NBBO and will result in a narrower spread for impacted NMS stocks, the NMS stocks that would be subject to both the round lot definition and the amended minimum pricing increments are likely to be very small in number and also extremely liquid, which could counteract any potential harm to liquidity resulting from the interaction of both changes. The round lot definition adopted in the MDI Adopting Release and the amended minimum pricing increments each will impact the NBBO and each will result in a narrower spread for those NMS stocks that are assigned a smaller round lot⁷⁹⁵ or a smaller minimum pricing increment.⁷⁹⁶

The round lot definition will narrow the spread for NMS stocks that have an average closing price over \$250 per share by showing better prices for these stocks. The amended minimum pricing increments will reduce the spread for those NMS stocks that have a narrow TWAQS and will allow these stocks to be priced more competitively in smaller increments, which will more accurately reflect supply and demand. Accordingly, the smaller round lot and the smaller minimum pricing increment narrow spreads in different ways. In response to the comment stating that the round lot definition and the proposed tick size changes are duplicative because they would both result in narrow spreads,⁷⁹⁷ both requirements will narrow spreads, but they are not duplicative.

Although there may be NMS stocks that are assigned both a smaller round lot and a smaller minimum pricing increment, Commission analysis of data discussed below shows that this overlapping universe of NMS stocks is very small. In other words, most NMS stocks will not be assigned both a round lot that is less than 100 shares and a smaller \$0.005 minimum pricing increment and therefore will not experience a combined impact on the NBBO spread or depth. As explained in the analysis, since only a few NMS stocks are expected to be subject to both a smaller round lot and a smaller tick size, the potential combined impact of

the amendments to the minimum pricing increments and round lots should be limited.⁷⁹⁸ Specifically, in response to comments expressing concerns about the combined impact of the proposed smaller minimum pricing increments and the implementation of the round lot definition,⁷⁹⁹ the Commission conducted the analysis to determine the magnitude of NMS stocks that would be impacted by both changes. According to the Commission’s analysis, as of November 30, 2023, only 163 NMS stocks were priced above \$250.00 per share and would have been potentially eligible to be assigned to a round lot size smaller than 100 shares, out of a universe of 11,200 NMS stocks on that date.⁸⁰⁰ Further, based on Commission review of the 163 NMS stocks that would have been assigned to a round lot less than 100 shares, as of November 30, 2023, only two out of the 163 had an average quoted spread over the previous thirty trading days of \$0.015 or less and therefore may have been potentially eligible to have been assigned to the smaller \$0.005 minimum pricing increment.⁸⁰¹ The two NMS stocks—SPY and QQQ—are among the most liquid exchange-traded products.⁸⁰² For the month of November 2023, SPY had the highest average daily traded value, while QQQ was ranked second in average daily traded value.⁸⁰³

⁷⁹⁸ See *infra* section VII.D.4.a. (discussing the impact of the acceleration of the implementation of the round lot definition and reduced tick sizes and stating that the number of stocks trading over \$250 with spreads narrower than \$0.015 is “likely very small”).

⁷⁹⁹ See, e.g., Virtu Letter II at 10; Citadel Letter I at 26; ASA Letter at 6.

⁸⁰⁰ The Proposing Release stated that, based on average closing prices on the primary listing exchange in Mar. 2022, there were 181 NMS stocks priced over \$250. See Proposing Release, *supra* note 11, at 80300 n.407.

⁸⁰¹ These NMS stocks were ETFs: SPY and QQQ. As of Nov. 30, 2023, the last sale price for SPY was \$454.30 and its average bid-ask spread over the previous 30 trading days was \$0.0105. For QQQ, as of Nov. 30, 2023, the last sale price was \$386.70 and the average bid-ask spread over the previous 30 trading days was \$0.0116. This analysis was conducted using Bloomberg data. See also *supra* section III for a discussion of the amended minimum pricing increments. The calculation of a TWAQS for NMS stocks will occur during an Evaluation Period for purposes of assigning minimum pricing increments. See Rule 612(a)(1).

⁸⁰² SPY and QQQ are also among the most liquid NMS stocks. Using Bloomberg data, for the period Jan. 22, 2024–Feb. 16, 2024, SPY had the highest average daily traded value of all NMS stocks, while QQQ was ranked fourth. Specifically, for this period, the average daily traded value per day for SPY was \$36,581,363,712, or 5.9% of total value traded of all U.S. equity trading, and for QQQ the average daily traded value per day was \$18,632,960,000, or 3.5% of total value traded of all U.S. equity trading.

⁸⁰³ Based on daily average traded value for Nov. 1, 2023–Nov. 30, 2023, using Bloomberg data. For SPY, the daily average traded value for Nov. 2023

⁷⁸⁷ See, e.g., NYSE Letter I at 7; Nasdaq Letter I at 3; Fidelity Letter at 16; Cboe Letter III at 10 n.18.

⁷⁸⁸ See *infra* section VI.C.

⁷⁸⁹ See Fidelity Letter at 16.

⁷⁹⁰ See, e.g., Virtu Letter II at 10; Citadel Letter I at 26; ASA Letter at 6; Tastytrade Letter at 22; SIFMA Letter II at 34; Morgan Stanley Letter at 3. See also Nasdaq Letter I at 34 (stating that “an effective tick reform proposal may alleviate the need to speed implementation of the round and odd lot proposals.”).

⁷⁹¹ See, e.g., Virtu Letter II at 10; Citadel Letter I at 26.

⁷⁹² See Virtu Letter II at 10.

⁷⁹³ See ASA Letter at 6.

⁷⁹⁴ See Virtu Letter II at 10.

⁷⁹⁵ See *infra* section VII.D.4.a.

⁷⁹⁶ See *infra* section VII.B.2; section VII.D.1.

⁷⁹⁷ See ASA Letter at 6.

Based on this information, while the Commission recognizes that the interaction of the minimum pricing increment and the round lot definition may result in some reduction of depth for the very few NMS stocks that may be subject to both a smaller tick size and a round lot size of less than 100 shares,⁸⁰⁴ the impact of the reduction of NBBO depth should not be of such a level as to impede trading in the affected NMS stocks because these stocks are highly liquid, which should greatly mitigate the impact of reduced depth at the NBBO.⁸⁰⁵ Furthermore, these changes will benefit investors and other market participants trading these stocks through more accurate pricing and a reduction in spreads. While the extent of any reduced depth at the NBBO is not known at this time, due to the volume traded in these two NMS stocks, any potential reduction will not impair market participants' ability to trade these stocks because these stocks would be among the most liquid and therefore easily traded.⁸⁰⁶

Additionally, some liquidity that is consolidated at the preexisting round lot⁸⁰⁷ and \$0.01 minimum pricing increment may be reflected in the adopted round lot sizes and smaller minimum pricing increment. Specifically, some odd-lot orders are currently aggregated into the 100-share round lot.⁸⁰⁸ Upon implementation of the round lot definition, some orders that were considered odd-lots may be of round lot size as defined. Further, interest that is displayed at the previously required \$0.01 minimum pricing increment may be reflected in orders that are entered in the smaller tick size. Once these amendments are implemented, the NBBO will reflect better prices, both because of the smaller round lot size for some NMS stocks and new \$0.005 increment for some other NMS stocks. As smaller sized orders in higher priced stocks are often priced better than orders that are currently in round lots, the smaller round lot sizes will allow potentially better priced orders to be the basis of the

NBBO.⁸⁰⁹ The new \$0.005 increment will also result in the NBBO reflecting better prices because the smaller increment will allow orders to be priced in a manner that is more reflective of the supply and demand of liquidity for the stock.⁸¹⁰ Accordingly, each of these amendments will result in narrower NBBO spreads and better prices.⁸¹¹ Further, those market participants that may need to trade in large sizes may be able to see liquidity outside of the NBBO by considering the new odd-lot information that will be available in SIP data as well as depth of book data that is available via exchange proprietary data feeds.⁸¹²

In response to the comment that raised concerns about the potential for the proposed variable minimum pricing increments and the new round lots to reduce transparency on the exclusive SIPs,⁸¹³ for the reasons discussed above,⁸¹⁴ the combined impact of the adopted minimum pricing increments and round lot definition should not reduce transparency for most NMS stocks and the exclusive SIPs will provide a more accurate NBBO once these amendments are implemented. While the round lot will be smaller for certain NMS stocks, as described above, the NBBO based on the new round lots will in many cases reflect better prices.⁸¹⁵ Therefore, while the actual number of shares will be smaller for certain NMS stocks, the disseminated prices will likely be better.⁸¹⁶ In addition, as discussed above, the new minimum pricing increment required under Rule 612 for certain NMS stocks will allow the NBBO that is disseminated by the exclusive SIPs to reflect more competitive pricing. These amendments will enhance the NBBO that is calculated and disseminated by the exclusive SIPs by reflecting more

competitive and better available prices.⁸¹⁷

Commenters also expressed concern that the implementation of the round lot definition and the proposed changes to the minimum pricing increments would confuse investors.⁸¹⁸ One commenter warned that changes to round lots and tick sizes would confuse retail investors and reduce trust in the market.⁸¹⁹

Because there are expected to be only a small number of NMS stocks that could be subject to both a change in a minimum pricing increment and a change to the round lot size, the risk of investor confusion is limited. Market participants may choose to educate investors about the new round lot and amended minimum pricing increments, as they sometimes choose to educate investors regarding other regulatory changes that impact how investors enter orders. Investors are already familiar with three round lot sizes⁸²⁰ and two minimum pricing increments,⁸²¹ so the addition of only one round lot size and one minimum pricing increment is unlikely cause investor confusion.⁸²² The Commission is also adopting new indicators for dissemination on the exclusive SIPs of the assigned round lots and minimum pricing increments to alert market participants, including investors, of the relevant round lot and minimum pricing increment for each NMS stock. These indicators will also help to mitigate concerns about any potential for investor confusion.⁸²³

ii. Comments on the Round Lot Indicator

The Commission proposed to amend Rule 600(b)(78) to add a requirement to make the indicator of the applicable round lot size available to the exclusive

was \$31,652,396,337. For QQQ, it was \$17,527,314,000.

⁸⁰⁴ See *infra* section VII.D.4.a.

⁸⁰⁵ See *infra* section VII.D.4.a. (stating, "[t]he exceptional liquidity of the affected stocks will likely protect their NBBO from material deterioration.").

⁸⁰⁶ *Id.*

⁸⁰⁷ See *supra* note 66.

⁸⁰⁸ See MDI Proposing Release, *supra* note 744, at 16738–39 (describing exchange rules on aggregating odd-lot across multiple prices and providing them to the exclusive SIPs at the least aggressive price if the combined odd-lot interest is equal to or greater than a round lot).

⁸⁰⁹ See Proposing Release, *supra* note 11, at 80294; MDI Adopting Release, *supra* note 10, at 18616.

⁸¹⁰ See *infra* section VII.D.1; section VII.D.1.b.i; section VII.D.1.b.ii; section VII.E.3.

⁸¹¹ See *infra* section VII.D.1 and note 1145 and accompanying text.

⁸¹² Once implemented, the MDI Rules will add depth of book information to consolidated market data, and this information will provide information about depth outside of the NBBO for those market participants that would find this information useful. See *infra* section VII.D.4.a.; MDI Adopting Release, *supra* note 10, at 18728, 18730 (explaining that SIP data currently only includes top-of-book quotes). 17 CFR 242.600(b)(26)(I) (defining "core data" to include depth of book data) and 17 CFR 242.600(b)(24)(i) (defining "consolidated market data" to include core data).

⁸¹³ See Virtu Letter II at 10.

⁸¹⁴ See *supra* notes 807–812 and accompanying text.

⁸¹⁵ See *supra* section V.B.1. (table 1 and table 2).

⁸¹⁶ See MDI Adopting Release, *supra* note 10, at 18742, 18743.

⁸¹⁷ See *supra* section III.C. See also MDI Adopting Release, *supra* note 10, at 18744, 18745. See also *infra* section VII.D.4.a. (stating that the round lot definition would shrink the NBBO for stocks priced greater than \$250, would increase transparency and would result in better order execution).

⁸¹⁸ See, e.g., Tastytrade Letter at 22; SIFMA Letter II at 34; Morgan Stanley Letter at 3.

⁸¹⁹ See, e.g., Tastytrade Letter at 22.

⁸²⁰ Under exchange rules, there are three different round lot sizes. See *supra* note 67. The MDI Rules' round lot definition adds one more round lot size, i.e., 40 shares. Consistent with its views stated here, the Commission previously considered potential investor confusion with the additional round lot size and did not believe it will be confusing to investors. See MDI Adopting Release, *supra* note 10, at 18618.

⁸²¹ Preexisting Rule 612 included two minimum pricing increments based on the price of a quote or order—\$0.01 and \$0.0001.

⁸²² See *supra* section III. See also *infra* notes 1589–1593 and accompanying text.

⁸²³ See *infra* note 1385; MDI Adopting Release, *supra* note 10, at 18619.

SIPs in Rule 600(b)(78)(iv).⁸²⁴ The Commission is adopting this requirement as proposed in Rule 600(b)(89)(iv).⁸²⁵ The Commission did not receive comments specifically supporting or objecting to the proposed amendment. However, two commenters cited this requirement as support for their arguments that the proposed 90-day compliance deadline for the round lot and odd-lot information definitions would provide an insufficient amount of time.⁸²⁶ As discussed below,⁸²⁷ the Commission is providing more time for compliance with the round lot definition, which is a substantially longer period for compliance than the 90 days that was proposed.⁸²⁸ The Commission is providing a longer compliance period than proposed after considering the information provided by commenters that requested more time to comply with the implementation of the round lot definition, including implementation of the round lot indicator.⁸²⁹ The additional time will provide market participants with time to make the changes necessary to implement the round lot indicator.

iii. Comments on the Round Lot Definition

The Commission received comments on the round lot definition that was adopted in the MDI Rules.⁸³⁰ Commenters raised concerns about the defined round lot sizes,⁸³¹ the determination of round lot size based on price,⁸³² the impact of smaller round lot sizes on the relevance of the NBBO,⁸³³ and the impact of the round lot definition as well as the odd-lot information definition on bandwidth.⁸³⁴ The Commission considered and addressed issues related to adopting the round lot definition and the odd-lot

information definition in the MDI Adopting Release.⁸³⁵

One commenter stated that investors trading in options may be confused by the round lot definition, stating that retail investors who trade options know one options contract represents 100 shares or a “round lot.”⁸³⁶ The Commission considered and addressed the interaction of the new round lot definition and options trading in the MDI Adopting Release.⁸³⁷ Further, it is unlikely that the acceleration of the round lot definition could confuse retail investors trading in options. Specifically, the round lot size will not change the size of the options contract and precedent exists for standard options contracts on stocks with a round lot size less than 100 shares.⁸³⁸ Furthermore, corporate actions, such as rights offerings, stock dividends, and mergers can result in adjusted contracts representing stock in amounts other than 100 shares, so investors have some familiarity already with options on underlying NMS stocks that have a “round lot” that is less than 100 shares.⁸³⁹

Several commenters also suggested eliminating the concept of round lots altogether.⁸⁴⁰ The Commission is not eliminating the concept of round lots. As the Commission stated in the MDI Adopting Release, round lot orders continue to play an important role in the national market system by delineating orders of meaningful size and focusing regulatory requirements and protections—such as those set forth in rules 602, 604 and 611 of Regulation NMS—on such orders.⁸⁴¹ Further, as the Commission stated in the MDI Adopting Release, eliminating the concept of a round lot could also cause investor confusion and other unintended consequences.⁸⁴²

iv. Modified Round Lot Assignment Frequency and Evaluation Period for Round Lots

Under the MDI Rules, each NMS stock was assigned a round lot size every month based on its average closing price for the prior calendar month on its primary listing exchange.⁸⁴³ Commenters raised concerns about potential confusion and operational risks arising due to the fact that round lots and the proposed minimum pricing increments would be changed at different times,⁸⁴⁴ and several commenters suggested aligning the assignment of round lots and minimum pricing increments, either on a quarterly or on a semiannual basis.⁸⁴⁵ One commenter stated “having two to four adjustments per year strikes the appropriate balance between having the optimal round lot and minimum pricing increment with reducing the time that market participants are adjusting to the changes.”⁸⁴⁶ Another commenter warned that having differing assignment schedules for round lot sizes and minimum pricing increments “will materially elevate systemic risk since it only requires a single large market participant to create widespread disruption by failing to properly modify their systems.”⁸⁴⁷ The commenter suggested reducing the frequency of changes to quarterly or semiannually and synchronizing the round lot and minimum pricing increment changes.⁸⁴⁸

After further consideration, the Commission agrees with the concerns

⁸²⁴ See Proposing Release, *supra* note 11, at 80299.

⁸²⁵ See *supra* note 320.

⁸²⁶ See NYSE Letter I at 7–8; Letter from Robert Books, Chair of the Operating Committee, Operating Committees of the CTA Plan, CQ Plan and UTP Plan, dated Mar. 28, 2023 (“CTA, CQ, UTP Plans Operating Committees Letter”) at 3. See also *infra* section VI.C.

⁸²⁷ See *infra* section VI.C.

⁸²⁸ See Proposing Release, *supra* note 11, at 80300–01.

⁸²⁹ See *supra* note 826; *infra* section VI.C.

⁸³⁰ See, e.g., RBC Letter at 5; Tastytrade Letter at 21; T. Rowe Price Letter at 4; Pragma Letter at 8–9; Data Boiler Letter I at 8 and Data Boiler Letter II at 2.

⁸³¹ See, e.g., Pragma Letter at 1, 8, 9; T. Rowe Price Letter at 4.

⁸³² See, e.g., Tastytrade Letter at 21.

⁸³³ See, e.g., RBC Letter at 5.

⁸³⁴ See Data Boiler Letter I at 8; see also Data Boiler Letter II at 2. The commenter raised concerns about the round lot and odd-lot information definitions.

⁸³⁵ See MDI Adopting Release, *supra* note 10, at 18615–22.

⁸³⁶ See Tastytrade Letter at 22.

⁸³⁷ See MDI Adopting Release, *supra* note 10, at 18619, 18747.

⁸³⁸ For example, as of Oct. 26, 2023, one NMS stock has a round lot size of 10 shares while also possessing an option contract size of 100 shares.

⁸³⁹ See MDI Adopting Release, *supra* note 10, at 18619. See also *infra* section VII.D.4.a.

⁸⁴⁰ See, e.g., Nasdaq Letter I at 34–35; XTX Letter at 5; Angel Letter at 2–3; Anonymous Letter (Feb. 12, 2023) (stating that order sizes should be treated the same, regardless of status as a round lot or an odd-lot).

⁸⁴¹ See MDI Adopting Release, *supra* note 10, at 18618 n.274.

⁸⁴² See MDI Adopting Release, *supra* note 10, at 18618 n.274.

⁸⁴³ MDI Adopting Release, *supra* note 10, at 18617.

⁸⁴⁴ See, e.g., FIF Letter at 13; Hudson River Letter at 2, 4; BlackRock Letter at 9, 10. See also SIFMA Letter II at 34, 35 (stating that “The Tick Size Proposal would make dynamic three components of trading that are static today: (i) tick sizes; (ii) access fees; and (iii) round lots. Exacerbating this complication, tick sizes would adjust quarterly, while round lots would change monthly. Tick sizes would be based on average quoted spread, while round lots are based on a stock’s price.”); Morgan Stanley Letter at 3 (stating that the proposed amendments would require “market participants to make frequent changes to their systems . . .” that “. . . the risk of technology failure created by monthly and/or quarterly changes to systems by the buy-side, sell-side, exchanges and vendors (including security information processors) may introduce new market and operational risks . . .” and that “. . . this dynamic aspect of the proposal could create investor confusion and potentially drive trading inefficiencies.”).

⁸⁴⁵ Two commenters suggested aligning the assignment of round lots and minimum pricing increments on a quarterly or semiannual basis. See Hudson River Letter at 2, 4; BlackRock Letter at 10. One commenter suggested aligning both assignments on a quarterly basis. See FIF Letter at 13. See also *infra* notes 849–853 and accompanying text.

⁸⁴⁶ Hudson River Letter at 4.

⁸⁴⁷ BlackRock Letter at 10.

⁸⁴⁸ See *id.*

raised by the commenters. Frequent systems changes and updates can introduce risks for market participants and the market, and frequent changes to the terms of how an order is entered for an NMS stock can potentially cause investor confusion. Therefore, the Commission is amending the round lot definition to make the timing for assigning round lots consistent with the timing for assigning minimum pricing increments. Such alignment on a semiannual basis will help to facilitate an orderly market and help reduce operational risks and investor confusion.

As described above, the Commission is adopting a definition of Evaluation Period under Rule 612 that will result in the assignment of minimum pricing increments on a semiannual basis instead of on a quarterly basis, as proposed.⁸⁴⁹ The Commission has therefore decided to amend the round lot definition to change the frequency of round lot changes from a monthly basis to a semiannual basis (the round lot sizes and price tiers for assigning round lots adopted in the MDI Adopting Release have not changed). Specifically, the Commission is amending Rule 600(b)(93) to require round lots to be assigned on a semiannual basis instead of on a monthly basis, which will match the minimum pricing increment assignment frequency of amended Rule 612.⁸⁵⁰ Amended Rule 600(b)(93)(i) will assign each NMS stock to a round lot size based on the NMS stock's average closing price on the primary listing exchange during a one month Evaluation Period. Amended Rule 600(b)(93)(iii) will define the Evaluation Period as (A) all trading days in March for the round lot assigned on the first business day in May and (B) all trading days in September for the round lot assigned on the first business day of November during which the average closing price of an NMS stock on the primary listing exchange shall be measured by the primary listing exchange to determine the round lot for each NMS stock.⁸⁵¹

⁸⁴⁹ While the Commission proposed in Rule 612(a) to define a quarterly tick evaluation period, it is adopting a semiannual tick Evaluation Period in amended Rule 612(a)(1). See *supra* section III.C.7.a.

⁸⁵⁰ The Commission's amendments to Rule 600(b)(93) will also renumber the sub-provisions within rule 600(b)(93). The round lot tiers in preexisting Rule 600(b)(93)(i)–(iv) will be renumbered as Rule 600(b)(93)(i)(A)–(D). Preexisting Rule 600(b)(93)(v) will be amended and renumbered as Rule 600(b)(93)(ii). Preexisting Rule 600(b)(93)(iii)–(iv) will contain provisions related to a new “Evaluation Period.”

⁸⁵¹ Amended Rule 600(b)(93) and amended Rule 612(a)(1) each define “Evaluation Period” differently.

Further, amended Rule 600(b)(93)(iv) will provide time for market participants to implement any reassignments of round lots and provides that the assigned round lots will be operative until the next semiannual date for a new round lot change. Specifically, round lots assigned under Rule 600(b)(93) shall be operative on (A) the first business day of May for the March Evaluation Period and continue through the last business day of October of the calendar year, and (B) the first business day of November for the September Evaluation Period and continue through the last business day of April of the next calendar year. For both round lots and minimum pricing increments, the adopted semiannual assignment dates will be the first business day in May and the first business day of November.

Like amended Rule 612, in amended Rule 600(b)(93)(iv) the Commission is adopting a one-month time period between the conclusion of each Evaluation Period and each operative date (*i.e.*, the date on which the round lot assignment becomes effective) to provide market participants with time to implement any new round lot assignments. These changes address concerns about operational risks and will help to ensure the orderly implementation of the systems changes necessary to implement the new round lots and minimum pricing increments. Further, market participants will be able to use the one-month implementation period to communicate with investors about any upcoming changes, which will help to minimize potential investor confusion.

These amendments are responsive to commenters who suggested aligning the assignment of round lots and minimum pricing increments.⁸⁵² By aligning the timing for assigning round lot sizes to the timing for assigning minimum pricing increments, there will be fewer modifications to market participants' systems and they will have more time to implement such systems changes. These amendments to the round lot definition address commenter concerns about systemic risk and the risk of market disruptions because market participants will only have to make systems changes two times per year for round lot assignments and tick reassignments rather than twelve and four times per year, respectively.⁸⁵³ These amendments to make the assignment of round lots uniform with the assignment of minimum pricing

increments will reduce potential confusion for investors because they will only have to understand two round lot assignments per year instead of twelve.

The Commission is not changing the round lot sizes, pricing tiers or the calculation used to assign round lots. As originally adopted, round lots were assigned based on the average closing price of the prior month on the primary listing exchange. Under Rule 600(b)(93)(iii), round lots will be assigned based on the average closing price during a specified month, *e.g.*, March or September on the primary listing exchange.

In the MDI Adopting Release, the Commission explained that assigning a round lot size based on the NMS stock's average closing price on the primary listing exchange for the prior calendar month would strike “an appropriate balance between using accurate, up-to-date pricing information and avoiding the cost and complexity of over-frequent computation and potential round lot reassignment.”⁸⁵⁴ The Commission also stated that market participants are accustomed to monthly updates, so monitoring for round lot size changes and implementing systems changes to account for the monthly calculation “would not be overly burdensome or costly.”⁸⁵⁵

In light of the concerns raised by commenters about potential confusion and potential operational risks due to the fact that round lots and minimum pricing increments would be changed at different times, the Commission reviewed data that compared how often round lot sizes would change if subject to monthly evaluations, as the MDI Rules previously required, to how often they would change if subject to a semiannual evaluation based on one month of prices.⁸⁵⁶ The Commission examined the average closing prices of NMS stocks from January 2019 through September 2023 (6,052 stocks) using

⁸⁵⁴ See MDI Adopting Release, *supra* note 10, at 18619.

⁸⁵⁵ *Id.*

⁸⁵⁶ See *infra* section VII.D.1.d for a discussion of the semiannual evaluation of minimum pricing increments. As discussed above, the Commission is aligning the assignment of round lots and minimum pricing increments. A longer round lot assignment frequency, such as annual assignments, would more likely result in round lot sizes calculated based on prices not reflective of current trading. Limiting round lot reassignments to a frequency of once every six months was determined to be sufficient to achieve the goals stated in the MDI Adopting Release, while reducing costs and complexity for market participants. See also *infra* notes 1594–1595 and accompanying text (discussing the impact of the semiannual evaluation period and the lag between evaluation and implementation on the accuracy of round lot assignments).

⁸⁵² See Hudson River Letter at 2, 4; BlackRock Letter at 10.

⁸⁵³ *Id.*

Bloomberg data. During this time, only 323 NMS stocks moved above or below the round lot tiers of \$250.01 per share, \$1,000.01 per share, and \$10,000.01 per share. If round lot sizes were updated on a monthly basis, there would have been 1,012 total changes over the past five years, for an average of 17 changes per month. If round lot sizes were updated every six months, there would have been 454 total changes over the past five years, for an average of 50 changes every six months.⁸⁵⁷ The data suggests that lengthening the time between assigning round lots will reduce the number of re-assignments. Some of the re-assignments identified using the monthly reassignment were the result of some NMS stocks shifting between round lots sizes from month to month. The shifting of round lot size tiers from month to month may increase the potential for investor confusion. This is similar to the concerns expressed by commenters about having asynchronous round lot and minimum pricing increments changes.

Finally, the Commission is amending Rule 600(b)(93)(v), which previously stated that a round lot for an NMS stock for which the prior calendar month's average closing price is not available is an order for the purchase or sale of 100 shares. This preexisting provision assigned new NMS stocks to a 100-share round lot because such NMS stocks that started trading intra-month did not have an average closing price from the prior calendar month upon which to make a round lot assignment.⁸⁵⁸ As amended, preexisting section (v) will be renumbered as Rule 600(b)(93)(ii) and will be amended to state instead that any security that becomes an NMS stock during an operative period as described under new paragraph (iv) shall be assigned a round lot of 100 shares. This provision is consistent with the preexisting provision. New NMS stocks that begin trading during an operative period will not be able to have an average closing price calculated during an Evaluation Period. Further, this new language will make the round lot definition similar to Rule 612 in identifying those NMS stocks that become NMS stocks during an operative

period and have not yet been an NMS stock during an Evaluation Period.

C. Final Rule—Odd-Lot Information

The Commission is adopting an accelerated implementation schedule for odd-lot information definition that is modified from the proposal in order to provide a longer time for market participants to update and modify their systems.⁸⁵⁹ Further, the Commission is adopting amendments to Rule 603(b) under Regulation NMS, as proposed, to require the exclusive SIPs to collect, consolidate and disseminate odd-lot information. Finally, the Commission is adopting amendments to the definition of odd-lot information to include the best odd-lot order, as proposed.

1. Proposed Acceleration of Odd-Lot Information Definition

The Commission proposed to accelerate the implementation of the odd-lot information definition under Rule 600(b)(59)⁸⁶⁰ by requiring SROs to provide the data necessary to generate odd-lot information to the exclusive SIPs and to require the exclusive SIPs to collect, consolidate, and disseminate odd-lot information.⁸⁶¹ Specifically, the Commission proposed to amend Rule 603(b) under Regulation NMS to require the national securities exchanges and national securities associations to make all data necessary to generate odd-lot information available to the exclusive SIPs and to require the exclusive SIPs to collect, consolidate, and disseminate odd-lot information.⁸⁶²

⁸⁵⁹ See *infra* section VI.C.

⁸⁶⁰ The MDI Rules adopted the definition of odd-lot information in rule 600(b)(59). This provision was subsequently renumbered to Rule 600(b)(69) by the Rule 605 Amendments. 17 CFR 242.600(b)(69); Rule 605 Amendments, *supra* note 10.

⁸⁶¹ Pursuant to the implementation period for the MDI Rules, odd-lot information will be collected, consolidated, and disseminated by competing consolidators, beginning during the parallel operation period. See Proposing Release, *supra* note 11, at 80298.

⁸⁶² See proposed Rule 603(b)(3). While the MDI Rules do not require competing consolidators to disseminate all consolidated market data elements, such as odd-lot information, in consolidated market data products, the Commission proposed to require the exclusive SIPs to collect, consolidate, and disseminate odd-lot information. Under the decentralized consolidation model, competing consolidators will be permitted to design consolidated market data products with different elements of consolidated market data for their subscribers and subscribers will be able to choose competing consolidators and consolidated market data products that meet their needs. See MDI Adopting Release, *supra* note 10, at 18659. Under the existing exclusive SIP model, the exclusive SIPs are the only source of consolidated NMS information and—while proprietary data products offer some of the same data content, including odd-lot quotations—subscribers would have no alternative providers of consolidated NMS information if such data were not required to be

The Commission proposed to divide Rule 603(b) into three new subsections to reflect the requirements under Rule 603(b) until the MDI Rules are implemented. As proposed, Rule 603(b)(1) governs the applicability of Rules 603(b)(2) and (b)(3) by describing the compliance dates set forth in the MDI Rules. Proposed Rule 603(b)(2) governs the provision of consolidated market data by competing consolidators and self-aggregators pursuant to the decentralized consolidation model set forth in the MDI Rules. Proposed Rule 603(b)(3) governs the provision of NMS information by the exclusive SIPs, including the new requirements regarding the collection, consolidation, and dissemination of odd-lot information.

Therefore, proposed Rule 603(b)(1)(i) states that compliance with Rule 603(b)(3) is required until the date indicated by the Commission in any order approving amendments to the effective national market system plan(s) to effectuate a cessation of the operations of the plan processors that disseminate consolidated information regarding NMS stocks. Proposed Rule 603(b)(1)(ii) states that compliance with proposed Rule 603(b)(2) is required 180 calendar days from the date of the Commission's approval of the amendments to the effective national market system plan(s) required under rule 614(e).⁸⁶³

Preexisting Rule 603(b), which imposes requirements on the dissemination of consolidated market data by national securities exchanges and national securities associations, was proposed to be renumbered as Rule 603(b)(2). Proposed Rule 603(b)(3) requires every national securities exchange on which an NMS stock is traded and national securities association to act jointly pursuant to one or more effective NMS plans to disseminate consolidated information, including a national best bid and national best offer and odd-lot information, on quotations for and transactions in NMS stocks, and the effective plan or plans must provide for the dissemination of all consolidated information for an individual NMS stock through a single plan processor. The single plan processor must represent quotation sizes in such consolidated information in terms of the number of shares, rounded down to the nearest multiple of a round lot.

collected, consolidated, and disseminated by the exclusive SIPs. Therefore, the Commission proposed that the exclusive SIPs be required to disseminate odd-lot information.

⁸⁶³ 17 CFR 242.614(e). See also MDI Adopting Release, *supra* note 10, at 18700 n.1355.

⁸⁵⁷ The Commission's analysis revealed that certain NMS stocks shifted above and below the \$250 per share threshold, which resulted in the difference in number of changes between the monthly round lot updates and the semiannual round lot updates. For example, one NMS stock would have changed round lot size 24 times over five years if round lot sizes were adjusted monthly, as compared to four times if round lot sizes were adjusted semiannually.

⁸⁵⁸ See MDI Adopting Release, *supra* note 10, at 18619.

Additionally, every national securities exchange on which an NMS stock is traded and national securities association shall make available to a plan processor all data necessary to generate odd-lot information.

The Commission did not receive any comments on proposed Rule 603(b)(1), which added the compliance dates already adopted in the MDI Rules, or the renumbering of current Rule 603(b) as Rule 603(b)(2), and is adopting these changes, as proposed. The Commission discusses proposed Rule 603(b)(3) ⁸⁶⁴ herein, which the Commission is adopting as proposed.

a. General Comments and Response

The Commission received comments in support of the proposed acceleration of the implementation of the odd-lot information consistent with the MDI Rules from individuals, firms, exchanges, and associations. ⁸⁶⁵ Generally, individual commenters supported the proposed acceleration of the implementation of the odd-lot information definition because it would increase transparency and “because odd-lots represent the majority of trades.” ⁸⁶⁶ Certain other market participants also supported the proposed acceleration of the odd-lot information definition for similar reasons, stating greater transparency would enhance price discovery, improve decision-making with respect to order routing, and reduce spreads. ⁸⁶⁷ Commenters further supported the acceleration of odd-lot information requirements because it would improve

the quality of SIP data and “make more data accessible to investors at lower prices by introducing competition into an otherwise monopolistic data market.” ⁸⁶⁸

Certain market participants stated that accelerating the implementation of odd-lot information is not necessary and overly burdensome given the other components of the proposal. ⁸⁶⁹ One commenter supported the acceleration of the MDI Rules with respect to odd-lots but stated that “[o]ver the long run, eliminating round lots altogether . . . may be a better resolution.” ⁸⁷⁰ In contrast, two commenters opposed accelerating the implementation of the odd-lot information definition, stating that it would increase the amount of development work required of market participants and therefore “delay the additional transparency that could be afforded by solely modifying the round lot definition.” ⁸⁷¹ Additional commenters supported acceleration of the revised round lot definition but not the odd-lot information definition, without providing a specific reason for the distinction, and generally urged the Commission to revisit comments on odd-lot dissemination. ⁸⁷²

The Commission is adopting proposed Rule 603(b)(3) with respect to the provision of odd-lot information, as proposed. The provision of odd-lot information within the national market system will provide significant benefits to investors by increasing transparency about better priced orders that are available in the market. The round lot definition will not provide transparency about those orders that remain odd-lots, *i.e.*, odd-lot quotation information. As discussed above, only those NMS stocks that are priced greater than \$250 will be assigned a smaller round lot size. These NMS stocks may still have odd-lots available at prices better than the round lot price. Further, the odd-lot information definition will provide transparency about better priced odd-lot orders for all NMS stocks.

While some commenters suggested that the Commission consider alternative sequencing of the proposal and expressed concern regarding the acceleration of the implementation of the odd-lot information definition: (1)

ahead of other elements of MDI Rules, (2) simultaneously with minimum pricing increments, and (3) simultaneously with the changes to the round lot definition. ⁸⁷³ investors and market participants should be provided with the benefits of odd-lot information sooner than the originally adopted implementation schedule in the MDI Adopting Release, ⁸⁷⁴ and the adoption of the acceleration of the odd-lot information requirements should occur contemporaneously with adoption of the other requirements outlined in the Proposing Release. Timelier implementation of the odd-lot information definition allows investors to benefit from greater transparency and accessibility of better priced orders and improved execution quality; waiting to implement the definition would delay these benefits for market participants. ⁸⁷⁵ Further, the implementation of the MDI Rules continues, although on a delayed basis as compared to the adopted implementation schedule. The implementation of odd-lot information on an accelerated schedule will not impede the further implementation of the remaining MDI Rules. ⁸⁷⁶

Apart from comments regarding sequencing, certain industry participants expressed concern that adding odd-lot information, including the BOLO, to the exclusive SIPs will increase message traffic and therefore increase costs. ⁸⁷⁷ One commenter stated that the proposal would add odd-lot information to exclusive SIP data without disclosing how much the SROs would charge retail investors and broker-dealers for the new data fields. ⁸⁷⁸ The commenter, while recommending that the Commission proceed with implementation of the MDI Rules and governance changes, stated that exclusive SIP data fees are “complex and often opaque” and that while SIP data costs are charged to retail customers on a per investor basis, the cost to produce SIP data does not scale on a per investor basis. ⁸⁷⁹

⁸⁷³ See, e.g., ICI Letter I at 2, 7; FIA PTG Letter II at 4–5; Robinhood Letter at 5, 44. See also *supra* section I.D (discussing overarching comments on the proposal in general).

⁸⁷⁴ See Proposing Release, *supra* note 11, at 80295.

⁸⁷⁵ As discussed below, the Commission is adopting an accelerated implementation schedule for the odd-lot information definition that is modified from the proposal in order to provide a longer period of time for market participants to update and modify their systems. See *infra* section V.I.C.

⁸⁷⁶ See *infra* section V.E.

⁸⁷⁷ See, e.g., FIF Letter at 13; FIA PTG Letter II at 5; Fidelity Letter at 17; FUSD Letter at 3.

⁸⁷⁸ See Fidelity Letter at 17.

⁸⁷⁹ See *id.*

⁸⁶⁴ See *infra* section V.C.1.a; section V.D.

⁸⁶⁵ The Commission also received comment on the timing proposed to implement the odd-lot information and round lot definitions. These comments are discussed below in section V.I.C.

⁸⁶⁶ See, e.g., Form Letter Type I, of which 22 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>. See also e.g., Form Letter Type D, of which 255 comments were received, Form Letter Type J, of which 15 comments were received, and Form Letter Type K, of which 22 comments were received, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>; Letters from Aric Ott (Mar. 6, 2023); Austin Peck (Mar. 31, 2023); Colin Clarry (Mar. 6, 2023); Aron Tastensen (Feb. 23, 2023); Dave and Paula Wager (Mar. 6, 2023); Mark Rogers (Mar. 30, 2023); Erik Jansen (Mar. 31, 2023).

⁸⁶⁷ See, e.g., Cboe Letter II at 10 (stating that odd-lot transactions represent a majority of trades, odd-lot quotations represent significant price improvement on Cboe’s exchanges and stating “the inclusion of odd-lot quotations on the SIPs is long overdue”); IEX Letter I at 6; Nasdaq Letter I at 3, 10; MFA Letter at 13–14; Better Markets Letter I at 16–17; NYSE Letter I at 7; Cboe Letter II at 2; SIFMA AMG Letter I at 9; JPMorgan Letter at 2; Letter from Tom Davin, Senior Vice President, Software & Information Industry Association, Managing Director, Financial Information Services Division, Financial Information Services Division of the Software & Information Industry Association, dated Mar. 29, 2023 (“FISD Letter”) at 1, 3.

⁸⁶⁸ See, e.g., Robinhood Letter at 5; Proof Letter at 1.

⁸⁶⁹ See, e.g., FIA PTG Letter II at 4; Hudson River Letter at 2; NYSE, Schwab, and Citadel Letter at 2; STA Letter at 8; Schwab Letter II at 6; BlackRock Letter at 12; MEMX Letter at 7.

⁸⁷⁰ Nasdaq Letter I at 3, 10.

⁸⁷¹ See FIA PTG Letter II at 4; Hudson River Letter at 2.

⁸⁷² See, e.g., NYSE, Schwab, and Citadel Letter at 2; STA Letter at 8; Schwab Letter II at 6.

While the addition of odd-lot quotation information to the exclusive SIPs will increase the number of messages that the exclusive SIPs will have to collect and consolidate and the number of messages that will be made available to market participants, the exclusive SIPs and market participants can handle such increased message traffic. As discussed in the Proposing Release, the systems used by exchanges and other market participants can handle many levels of data messages at extreme low latency and should be able to adjust to the addition of odd-lot quotation information.⁸⁸⁰ Further, the exclusive SIPs have been discussing the addition of odd-lot quotation information to SIP data for several years⁸⁸¹ and should be able to make the necessary adjustments to their processors in the adopted timeframe.⁸⁸² To the extent that increased message traffic increases costs for the exclusive SIPs, the Commission estimated those costs in the Proposing Release, which are discussed below.⁸⁸³

The Commission discussed the potential for new fees related to consolidated market data, which includes odd-lot information, in the MDI Adopting Release.⁸⁸⁴ Fees imposed by the exclusive SIPs are subject to the Exchange Act and the rules thereunder. The Commission discussed the statutory standards for any potential fees for consolidated market data, which includes odd-lot information, in the MDI Adopting Release.⁸⁸⁵ Specifically, the statutory standards that apply to fees proposed by the effective market system plan(s) include section 11A(c)(1)(C)–(D) of the Exchange Act and rule 603(a) under Regulation NMS. Proposed fees must be fair and reasonable and not unreasonably discriminatory. As discussed in the MDI Adopting Release, the Commission has historically assessed fees for data, such as the data content underlying consolidated market data of which odd-lot information is a part, using a reasonably related to cost standard.⁸⁸⁶ To the extent that the

exclusive SIPs propose to increase SIP data fees because of the addition of odd-lot information, any such new proposed fees must be filed with the Commission pursuant to rule 608, published for public comment and approved by the Commission before they can take effect.⁸⁸⁷ Further, as discussed in the Proposing Release, expediting the inclusion of odd-lot information to the exclusive SIPs can provide additional competition to the segment of the market that subscribes to proprietary data with odd-lot information for use in visual display settings.⁸⁸⁸

One commenter requested confirmation that exchange proprietary data feeds could be used to provide odd-lot information to the exclusive SIPs consistent with statements in the MDI Adopting Release that odd-lot information could be made available to competing consolidators and self-aggregators (under the decentralized consolidation model) using “existing proprietary data feeds, a combination of proprietary data feeds, or a newly developed consolidated market data feed.”⁸⁸⁹ As previously stated by the Commission, the use of proprietary data feeds for delivering odd-lot information is consistent with the MDI Rules in the context of the decentralized consolidation model.⁸⁹⁰ The use of proprietary data feeds for purposes of providing data to the exclusive SIPs may require consideration by the exclusive SIPs and the Operating Committees of the technical specifications that may be necessary for purposes of collecting and distributing such information to the exclusive SIPs.⁸⁹¹

One commenter stated that “disseminating odd lot quotes on the SIP could lead investors to expect prices that are not available.”⁸⁹² Odd-lot quotation information will reflect actual

prices of actual orders that have been submitted by market participants. This information will provide investors with valuable information about the prices at which other market participants are willing to trade. However, as with any change, market participants may have to educate investors as to the existence of odd-lot quotation information on the exclusive SIPs.

2. Proposed Amendment to Odd-Lot Information Definition for Best Odd-Lot Orders

The odd-lot information definition includes (1) odd-lot transactions,⁸⁹³ and (2) odd-lots at a price greater than or equal to the national best bid and less than or equal to the national best offer, aggregated at each price level at each national securities exchange and national securities association.⁸⁹⁴ Accordingly, once implemented, information on odd-lot orders priced better than the NBBO will be included in the NMS information that is made available to market participants within the national market system.

The Commission proposed to amend the definition of odd-lot information to include a BOLO as new Rule 600(b)(59)(iii). Specifically, for each NMS stock, the best odd-lot order to buy would mean the highest priced odd-lot order to buy that is priced higher than the national best bid, and the best odd-lot order to sell would mean the lowest priced odd-lot order to sell that is priced lower than the national best offer. Similar to the definition of the NBBO, in the event that two or more national securities exchanges or associations provide odd-lot orders at the same price, the exclusive SIPs, competing consolidators and self-aggregators would be required to determine the best odd-lot order by ranking all such identical odd-lot buy orders or odd-lot sell orders (as the case may be) first by size (giving the highest ranking to the odd-lot buy order or odd-lot sell order associated with the largest size), and then by time (giving the highest ranking to the odd-lot buy order or odd-lot sell order received first in time).⁸⁹⁵

⁸⁸⁷ See 17 CFR 242.608(b). See also Rescission of Effective-Upon-Filing Procedure for NMS Plan Fee Amendments and Modified Procedures for Proposed NMS Plans and Plan Amendments, Securities Exchange Act Release No. 89618 (Aug. 19, 2020), 85 FR 65470 (Oct. 15, 2020).

⁸⁸⁸ See Proposing Release, *supra* note 11, at 80338 (discussing how expediting the inclusion of odd-lot data into the exclusive SIPs would impact competition among data providers).

⁸⁸⁹ MEMX Letter at 7.

⁸⁹⁰ See MDI Adopting Release, *supra* note 10, at 18653.

⁸⁹¹ Under rule 603(a), an SRO is prohibited from making its core data available to vendors on a more timely basis than it makes such data available to the exclusive SIPs. In the MDI Adopting Release, the Commission stated that rule 603(a) prohibits an SRO from making its NMS information available to any person on a more timely basis (*i.e.*, by any time increment that could be measured by the SRO) than it makes such data available to the exclusive SIPs. See MDI Adopting Release, *supra* note 10, at 18656.

⁸⁹² See Schwab Letter II at 36.

⁸⁹³ Odd-lot transaction information is currently collected, consolidated, and disseminated by the exclusive SIPs. See Securities Exchange Act Release Nos. 70793 (Oct. 31, 2013), 78 FR 66788 (Nov. 6, 2013) (order approving Amendment No. 30 to the UTP Plan to require odd-lot transactions to be reported to the consolidated tape); 70794 (Oct. 31, 2013), 78 FR 66789 (Nov. 6, 2013) (order approving Eighteenth Substantive Amendment to the Second Restatement of the CTA Plan to require odd-lot transactions to be reported to consolidated tape).

⁸⁹⁴ 17 CFR 242.600(b)(69); MDI Adopting Release, *supra* note 10, at 18613.

⁸⁹⁵ See 17 CFR 242.600(b)(60) (defining NBBO and setting forth the manner in which the NBBO

⁸⁸⁰ See Proposing Release, *supra* note 11, at 80279 (discussing the potential increased system traffic for the proposed minimum pricing increments).

⁸⁸¹ See Proposing Release, *supra* note 11, at 80297 (discussing a 2019 proposal by the CTA/CQ and UTP Plans to add odd-lot information to the exclusive SIPs).

⁸⁸² See *infra* section VI.C (revising the compliance timeframe from 90 days as proposed to 18 months from the effective date of the Adopting Release).

⁸⁸³ See *infra* sections VII.D.5 and VIII; see also Proposing Release, *supra* note 11, at 80299, 80301.

⁸⁸⁴ See MDI Adopting Release, *supra* note 10, at 18684.

⁸⁸⁵ See MDI Adopting Release, *supra* note 10, at 18650, 18684.

⁸⁸⁶ See MDI Adopting Release, *supra* note 10, at 18684 n.1158.

a. General Comments and Response

The Commission received comments supporting the requirement to identify the BOLO from individuals⁸⁹⁶ and market participants.⁸⁹⁷ As stated above, many individual commenters supported publishing odd-lot information, including the BOLO, in the exclusive SIPs in order to further transparency and aid investors in making more informed trading decisions.⁸⁹⁸ Similarly, certain other commenters viewed the additional information as a useful measure for all investors and their agents to better evaluate the best prices in NMS stocks and would enhance the ability to trade and route orders effectively as well as facilitate best execution.⁸⁹⁹ Certain market participants that support the publication of the BOLO cautioned against requiring broker-dealers to use the metric as a benchmark against execution quality.⁹⁰⁰ One of the commenters requested guidance regarding whether “market participants would be expected to clear the best odd-lot orders as part of ISO routing, notwithstanding that the odd-lot orders are not protected quotations.”⁹⁰¹ Finally, a number of individual commenters that expressed support for including odd-lot information in the exclusive SIPs urged the Commission to include “odd-lot transactions” in the NBBO, citing the fact that odd-lot transactions are now a majority of the market and most prevalent among retail investors.⁹⁰²

The Commission also received comments opposing the requirement to identify the BOLO, stating the information would create ambiguity or

investor confusion.⁹⁰³ Some of these commenters stated that confusion would arise from the fact that a customer would expect to receive the BOLO price even though it is not a protected quote.⁹⁰⁴ One commenter stated that the round lot and odd-lot requirements outlined in the MDI Adopting Release sufficiently provide increased transparency while minimizing confusion.⁹⁰⁵ One commenter stated that the transparency of odd-lot orders may be “gameable” such that a limit order to buy one share could change all execution quality benchmarks for brokers.⁹⁰⁶

As discussed below, the Commission is adopting the amendment to odd-lot information to include a BOLO, as proposed.⁹⁰⁷ While initially market participants may need to explain to their customers about the existence of the BOLO, this new data element is not expected to confuse investors. Investors are already able to see odd-lot transaction information and, upon implementation, the BOLO will provide them with information about the best odd-lot quotations. The BOLO is an informative, useful piece of information for investors to use when considering prices related to NMS stocks. Among other uses, the BOLO may serve as the benchmark execution price for execution quality statistics in rule 605 reports that measure price improvement relative to the best available displayed price.⁹⁰⁸ However, in rule 605 reports, the price improvement statistics relative to the best available displayed price will be a supplement to, rather than a replacement for, price improvement statistics relative to the NBBO.⁹⁰⁹

Further, rule 605 reports present information, including price improvement, in order size categories based on notional order size and whether the order is for a fractional share, odd-lot, or round lot.⁹¹⁰ These provisions provide more context for price improvement statistics that consider the best available odd-lot price and thus mitigate concerns about “gaming” execution quality reports. Further, rule 605 reports represent monthly, aggregated execution quality statistics and thereby dilute the effect of an odd-lot price at one specific point in time.

Several commenters stated that odd-lot quotations should be included in the NBBO.⁹¹¹ Odd-lot quotations are currently included in the calculation of the NBBO when they are aggregated into round lots for purposes of providing an exchange’s best bids and offers to the exclusive SIPs.⁹¹² Pursuant to Regulation NMS, bids and offers can only be in round lot sizes,⁹¹³ therefore, the NBBO can only be reflected in round lot sizes. The round lot definition as adopted in the MDI Rules, will categorize certain orders that are currently odd-lots as round lots based on their price, and as a result, quotations and orders that were previously defined as odd-lots will be eligible to establish the NBBO.⁹¹⁴ Orders that remain odd-lots under the new definitions are not bids and offers and therefore do not independently contribute to establishing the NBBO.

The identification of a BOLO will assist investors in assessing the current state of the market for individual NMS securities. The BOLO will reflect the best odd-lot price consolidated across all national securities exchanges and national securities associations and is therefore consistent with the goals set forth in section 11A of the Exchange Act because it will make information about quotations in NMS stocks available to broker-dealers and investors and will enhance the usefulness of odd-lot information. Although odd-lot liquidity better than the NBBO often resides at multiple price levels and information

is determined “in the event two or more market centers transmit to the plan processor, a competing consolidator or a self-aggregator identical bids or offers for an NMS security”).

⁸⁹⁶ See, e.g., Comment Letter Type D; Letters from Aron Tastensen (Feb. 23, 2023); Bill Goerger (Mar. 19, 2023); Carson Bruenderman (Mar. 7, 2023).

⁸⁹⁷ See, e.g., IEX Letter I at 6; Cboe, State Street, et al. Letter at 2; ASA Letter at 5; SIFMA Letter II at 4, 32; BlackRock Letter at 12. The Commission also received a comment that said that the Commission should not amend rule 603(c) to require the display of odd-lot information, but did not discuss the costs (or benefits) of such a requirement. See FIF Letter at 13. The Commission is not amending rule 603(c) in this release.

⁸⁹⁸ See, e.g., Comment Letter Type D, I, and K, available at <https://www.sec.gov/comments/s7-30-22/s73022.htm>; see *supra* notes 866 and 896.

⁸⁹⁹ See, e.g., IEX Letter I at 30–31; ICI Letter I at 6; Cboe Letter II at 10; BlackRock Letter at 12.

⁹⁰⁰ See, e.g., ASA Letter at 5; Fidelity Letter at 16; SIFMA Letter II at 4, 32.

⁹⁰¹ SIFMA Letter II at 34, 43.

⁹⁰² See, e.g., Comment Letter Type D, I and K; Letters from Chris Eastvedt (Mar. 6, 2023); M B (Mar. 6, 2023); Prakash Tamang (Mar. 6, 2023); Adam Aiello (Mar. 7, 2023); Shayne Gallagher (Mar. 7, 2023); Aswin Joy (Mar. 7, 2023); Daryll Fogal (Mar. 15, 2023); Bill Goerger (Mar. 19, 2023); Allie Birge (Mar. 31, 2023); Eileen Loh (Mar. 19, 2023).

⁹⁰³ See, e.g., Data Boiler Letter II at 3; JPMorgan Letter at 2, 7.

⁹⁰⁴ See JPMorgan Letter at 7 (stating further if the protected price is lower than the BOLO then “Rule 605 could show misleading negative price improvement while ignoring the order’s size”); Fidelity Letter at 16; SIFMA Letter II at 43.

⁹⁰⁵ JPMorgan Letter at 7.

⁹⁰⁶ Fidelity Letter at 16 (supporting “adding better-priced odd lots to the SIP when this information provides actionable information to the marketplace, such as helping broker-dealers meet their best execution obligations” but urging the Commission to “balance the advantages and disadvantages of odd-lot transparency,” such as the ability to influence execution quality statistics).

⁹⁰⁷ The Commission is adopting this amendment to the definition of odd-lot information in Rule 600(b)(69)(iii). See *supra* note 860.

⁹⁰⁸ See 17 CFR 242.600(b)(14) (defining best available displayed price) and 17 CFR 242.605(a)(1)(ii)(M) through (Q) (requiring rule 605 statistics relative to the best available displayed price). Entities that prepare rule 605 reports will be required to use the BOLO to compare the best available odd-lot price to the NBBO and determine the best available displayed price. In some cases, the best available displayed price may be the NBBO.

⁹⁰⁹ See Rule 605 Amendments, *supra* note 10.

⁹¹⁰ See Rule 605 Amendments, *supra* note 10.

⁹¹¹ See *supra* note 902.

⁹¹² See, e.g., NYSE Rule 7.36(b)(3); Nasdaq Equity 4, Rule 4756(c)(2); Cboe BZX Rule 11.9(c)(2). See also *supra* note 732.

⁹¹³ 17 CFR 242.600(b)(16) (defining “bid or offer” to mean “the bid price or the offer price communicated by a member of a national securities exchange or member of a national securities association to any broker or dealer, or to any customer, at which it is willing to buy or sell one or more round lots of an NMS security, as either principal or agent, but shall not include indications of interest.”).

⁹¹⁴ See *supra* section V.B.1.

reflecting all of these odd-lot prices is already included in the definition of odd-lot information, requiring the identification and dissemination of the best of all such inside the NBBO odd-lots on both the buy and sell side will help inform market participants of the best possible prices at which their orders (or their customers' orders) could—in whole or in part—be executed. The identification and dissemination of the price, size, and market of the best odd-lot orders will also enhance the ability of market participants to make effective trading and order routing decisions using NMS information and facilitate best execution. One commenter requested guidance on how to treat odd-lot orders for order routing purposes.⁹¹⁵ The Commission stated in the MDI Adopting Release that odd-lot information may be relevant to a broker-dealer's ability to analyze and achieve best execution.⁹¹⁶ As the Commission stated in the MDI Adopting Release, while odd-lot information, which will now include the BOLO, "may be relevant to broker-dealers' best execution analyses and, in many cases, will facilitate the ability of broker-dealers to achieve best execution for their customer orders, the Commission . . . is not setting forth minimum data elements needed to achieve best execution and does not expect that all market participants will need to purchase the most comprehensive or fastest consolidated market data product available."⁹¹⁷

D. Display of Round Lots and Odd-Lot Information

Currently, the exclusive SIPs represent quotation sizes in SIP data in terms of number of round lots. For example, for an NMS stock for which a round lot is 100 shares, a bid for 200 shares of that stock would be represented as a bid for "2" in SIP data.

Under the MDI Rules, competing consolidators are required to represent a round lot as the number of shares rounded down to the nearest multiple of a round lot.⁹¹⁸ For example, a 275-share

buy order at \$25.00 for a stock with a 100-share round lot would be disseminated as "200."⁹¹⁹ Accelerated implementation of the round lot definition will require the exclusive SIPs to revise their systems to reflect this change. Therefore, in proposed Rule 603(b)(3), the Commission proposed to require each exclusive SIP to, among other things, represent quotation sizes in consolidated information in terms of the number of shares, rounded down to the nearest multiple of a round lot.

1. Comments and Response

The Commission received comments on the display requirement adopted as part of the MDI Rules.⁹²⁰ One commenter stated that, for mixed lot orders, the total number of shares—both the round lot and odd-lot portions—should be included as consolidated market data.⁹²¹ Another commenter stated that, by requiring that the number of shares at each price level be displayed at the round lot level, the display requirement would make consolidated market data less useful and less competitive relative to exchange proprietary data feeds, which display the total number of shares at a price level.⁹²² The commenter also stated that basing quotations on the number of shares rounded to the nearest round lot (rather than based on round lots) could result in operational risk and investor confusion.⁹²³

As stated above, the display requirement was adopted as part of the

242.600(b)(26)(iii). See also 17 CFR 242.600(b)(26) (defining "core data"). The MDI Rules adopted the definition of "core data" in rule 600(b)(21). This provision was subsequently renumbered to rule 600(b)(26) by the Rule 605 Amendments. See Rule 605 Amendments, *supra* note 10.

⁹¹⁹ See MDI Adopting Release, *supra* note 10, at 18615. Through the definition of "odd-lot information," the MDI Rules also require odd-lots priced at or better than the NBBO to be represented in the aggregate at each price level at each national securities exchange or national securities association rather than on an order-by-order basis. 17 CFR 242.600(b)(69)(ii). See also 17 CFR 242.600(b)(26)(i)(H) (including "odd-lot information" as an element of core data). The MDI Adopting Release explained that "[a]ggregating better-priced odd-lots at each price level at each exchange . . . means that better-priced odd-lot orders will be represented in core data in terms of the total number of shares available at each price level at each exchange rather than on an order-by-order basis. For example, if the NBB for XYZ, Inc. is 100 shares at \$25.00, and there are three orders of five shares and two orders of ten shares at \$25.01 on Exchange A, a competing consolidator's core data product would show 35 shares at \$25.01 on Exchange A." MDI Adopting Release, *supra* note 10, at 18613 n.199. Therefore, quotations for odd-lot orders priced better than the NBBO are required to be displayed as the number of shares available in an odd-lot size that are aggregated at the same price.

⁹²⁰ See FIF Letter at 13; SIFMA Letter II at 34, 42.

⁹²¹ See FIF Letter at 13.

⁹²² See SIFMA Letter II at 42.

⁹²³ See SIFMA Letter II at 34.

MDI Rules. The Commission discussed the reasons for adopting the display requirement in the MDI Adopting Release.⁹²⁴ However, in response to the commenter that suggested the inclusion of both the round lot and odd-lot portions of mixed lot orders,⁹²⁵ since odd-lot information will be disseminated by the exclusive SIPs,⁹²⁶ the total number of shares of odd-lots priced at or better than the NBBO will be included in SIP data. Through the definition of odd-lot information, the MDI Rules require odd-lots priced at or better than the NBBO to be represented in the aggregate at each price level at each national securities exchange or national securities association rather than on an order-by-order basis.⁹²⁷

In response to the commenter that stated that displaying quotations in round lot sizes would undermine the usability and competitiveness of consolidated market data as compared to exchange proprietary data feeds,⁹²⁸ the Commission described the reason for displaying quotations in round lot sizes in the MDI Adopting Release, which remains relevant to the implementation of the round lot definition by the exclusive SIPs.⁹²⁹ Further, the Commission recognized in the MDI Adopting Release that different market participants need differing amounts of information to meet different trading objectives.⁹³⁰ The MDI Rules are intended to reduce information asymmetries between users of proprietary feeds and users of SIP data by enhancing the content of information made available in the national market system to enable market participants to trade efficiently and competitively.⁹³¹ For example, the inclusion of odd-lot quotations and the round lot definition will allow investors to see, and more readily access, better priced orders in smaller sizes.⁹³² As discussed above, the total number of shares of odd-lots priced at or better than the NBBO will be included in data that is made available by the exclusive SIPs. Certain market participants may choose to continue to purchase exchange proprietary data products if

⁹²⁴ See MDI Adopting Release, *supra* note 10, at 18615.

⁹²⁵ See FIF Letter at 13.

⁹²⁶ See amended Rule 603(b)(3).

⁹²⁷ 17 CFR 242.600(b)(69)(ii). See also *supra* note 919.

⁹²⁸ See SIFMA Letter II at 42.

⁹²⁹ See MDI Adopting Release, *supra* note 10, at 18615.

⁹³⁰ See MDI Adopting Release, *supra* note 10, at 18600.

⁹³¹ See MDI Adopting Release, *supra* note 10, at 18601.

⁹³² See MDI Adopting Release, *supra* note 10, at 18601, 18607.

⁹¹⁵ See *supra* note 901.

⁹¹⁶ See MDI Adopting Release, *supra* note 10, at 18605 for a discussion of the implications of expanded consolidated market data on the duty of best execution.

⁹¹⁷ *Id.* at 18605–06. Consolidated market data products will be developed by competing consolidators once the decentralized consolidation model is implemented. See rule 600(b)(25), 17 CFR 242.600(b)(25) (defining consolidated market data product).

⁹¹⁸ Under the MDI Rules, the definition of "core data" requires competing consolidators to represent certain core data elements, including the best bid and best offer, the NBBO, and protected quotations in terms of the number of shares, rounded down to the nearest multiple of a round lot. 17 CFR

they require more granular information about odd-lots. Here, the Commission's amendment is limited in reach—it extends the MDI Rules' display requirement to the exclusive SIPs as part of the accelerated implementation of the round lot and odd-lot information definitions, changing only the entity responsible for displaying this information—from competing consolidators to the exclusive SIPs. This change by itself should not impact the utility or competitiveness of consolidated market data. With respect to the commenter's concerns that the display requirement would result in operational risk and investor confusion,⁹³³ the required display of mixed lot orders rounded down to the nearest multiple of a round lot was previously adopted in the MDI Rules for competing consolidators.⁹³⁴ In the MDI Adopting Release, the Commission stated that the preexisting convention of displaying the number of round lots “could be confusing” when applied to the MDI Rules' round lot definition, which, once implemented, will assign varying round lot sizes to individual NMS stocks based on stock price.⁹³⁵ Further, the Commission explained that rounding down to the nearest round lot multiple would ensure that the elements of core data would reflect orders of meaningful size, and that for the NBBO, rounding down would help ensure that the protected portion of the order is clearly represented, to address concerns about impacts on investor confidence and investor confusion that potentially could result from the display of unprotected size at the NBBO.⁹³⁶ The Commission also stated that odd-lots priced at or better than the NBBO, including the odd-lot portion of a mixed lot order at the NBBO, will be included in core data.⁹³⁷ The Commission is extending this display requirement to exclusive SIPs as part of the accelerated

implementation of the round lot and odd-lot information definitions. There should not be any new operational risks or investor confusion arising from this change because only the entity responsible for displaying the information is changing.

The Commission is adopting Rule 603(b)(3) as proposed.

E. MDI Rules Implementation

Some commenters discussed the benefits of the MDI Rules⁹³⁸ and expressed concern that the accelerated implementation of the round lot and odd-lot information definitions could indefinitely delay implementation of the remainder of the MDI Rules,⁹³⁹ stating that these proposed changes were not a substitute for implementation of all of the MDI Rules.⁹⁴⁰ Some commenters suggested that the changes proposed in the Regulation NMS Proposal should be postponed until the full implementation of the MDI Rules.⁹⁴¹ Some commenters also raised concerns that the Commission was separately accelerating the implementation of the round lot and the odd-lot information definitions apart from the other components of the MDI Rules.⁹⁴² One commenter stated that “full implementation of the MDI Rules” is “a necessary first step for any significant changes to market structure,” and whether or not fully implemented, “an indispensable component of the ‘baseline’ against which this proposal must be measured and justified.”⁹⁴³

Despite delays in the process,⁹⁴⁴ the implementation of the MDI Rules continues to be a Commission priority. In September 2023, the Commission issued an amended order directing the SROs to file a proposed new single national market system plan regarding consolidated equity market data.⁹⁴⁵ Consolidation of the multiple Equity Data Plans into a single, new equity data

plan would modernize the governance of the existing Equity Data Plans.⁹⁴⁶

The Commission disagrees with comments that recommended delaying implementation of the Regulation NMS Proposal until the full implementation of the MDI Rules.⁹⁴⁷ Due to the delayed implementation of the MDI Rules, the Commission proposed to accelerate the implementation of the round lot and odd-lot definitions because these definitions can be efficiently implemented under the current exclusive SIP model.⁹⁴⁸ Not doing so would unnecessarily delay the benefits of the round lot and odd-lot information definitions to investors and market participants. One goal in adopting the round lot definition was to increase transparency about the better priced orders available in the market by allowing each exchange's BBO and the NBBO for an NMS stock to be based upon smaller, potentially better priced orders, which will also improve market participants' ability to access these orders.⁹⁴⁹ Waiting to implement the round lot definition would delay these benefits for market participants. Further, full implementation of the MDI Rules will not address the issues discussed above related to the minimum pricing increments for certain NMS stocks, the access fee caps for protected quotations and exchange fees.⁹⁵⁰ Finally, as discussed below, the eventual implementation of the MDI Rules is part of the baseline for the amendments to Rules 610 and 612.⁹⁵¹

VI. Compliance Dates

The Commission proposed different compliance dates for the individual proposed rule amendments. As discussed below in the relevant sections, the Commission received several comments on the proposed compliance dates.⁹⁵² The Commission is adopting compliance dates that are longer than proposed.⁹⁵³

⁹⁴⁶ Rule 614(e) of the MDI Rules requires that an amendment to the effective national market system plan(s) be filed with the Commission to conform such plan(s) to the decentralized consolidation model. 17 CFR 242.614(e).

⁹⁴⁷ See, e.g., SIFMA Letter II at 44; Robinhood Letter at 5; see also Robinhood Letter at 42, 49.

⁹⁴⁸ See Proposing Release, *supra* note 11, at 80296 n.359.

⁹⁴⁹ See Proposing Release, *supra* note 11, at 80294. For more details, see MDI Proposing Release, *supra* note 744, at 16743.

⁹⁵⁰ See *supra* sections III.A, IV.C, and IV.E.

⁹⁵¹ See *infra* section VII.C.3.

⁹⁵² See, e.g., NYSE Letter I at 7–8; CTA, CQ, UTP Plans Operating Committees Letter at 3; FISD Letter at 2, 3, 4; Nasdaq Letter I at 3; Cboe Letter II at 11; FIF Letter at 14; Cboe Letter III at 10 n.18.

⁹⁵³ In addition, with respect to the compliance dates, several commenters requested the

⁹³³ See SIFMA Letter II at 34.

⁹³⁴ 17 CFR 242.600(b)(26)(iii).

⁹³⁵ See MDI Adopting Release, *supra* note 10, at 18615.

⁹³⁶ See MDI Adopting Release, *supra* note 10, at 18615 n.236. Rule 611 of Regulation NMS requires trading centers to have policies and procedures that are reasonably designed to prevent “trade-throughs” on that trading center of protected quotes in NMS stocks, subject to specified exceptions. 17 CFR 242.611. Rule 611 currently only applies to round lots. Specifically, rule 611 applies to “protected quotations” which means “protected bid[s] or []protected offer[s].” 17 CFR 242.600(b)(82). “Protected bid or protected offer,” as defined in rule 600(b)(81), refers to “a quotation,” defined in rule 600(b)(86), which in turn refers to “a bid or an offer,” defined in rule 600(b)(16), which, as noted above, only applies to round lots. See *supra* note 913 and accompanying text.

⁹³⁷ See MDI Adopting Release, *supra* note 10, at 18615 n.236; see also *supra* note 919.

⁹³⁸ See, e.g., Schwab Letter II at 36; FIA PTG Letter II at 5; Robinhood Letter at 46–47.

⁹³⁹ See, e.g., JPMorgan Letter at 7; Citadel Letter I at 26; ICI Letter I at 2–3 n.8; Robinhood Letter at 5. See also Schwab Letter II at 36.

⁹⁴⁰ See SIFMA Letter II at 44. This commenter and another commenter stated that the Commission has not taken action to ensure the implementation of the full set of MDI Rules since disapproving the proposed fees and proposed amendments to the current NMS plans for consolidated market data in 2022. *Id.*; SIFMA AMG Letter I at 9. See also Fidelity Letter at 4; FIA PTG Letter II at 5.

⁹⁴¹ See, e.g., SIFMA Letter II at 44; Robinhood Letter at 5.

⁹⁴² See, e.g., Robinhood Letter at 5, 38, 41–42, 43, 47, 48, 49; JPMorgan Letter at 7; Citadel Letter I at 26.

⁹⁴³ Robinhood Letter at 49. See also Robinhood Letter at 44, 46–49. See also *infra* section VII.C.3.

⁹⁴⁴ See *supra* notes 73–76 and accompanying text.

⁹⁴⁵ See *supra* note 78.

Specifically, for the reasons discussed below, the amendments adopted herein will have the following compliance dates:

Rules 600(b)(89)(i)(F) and 612: The first business day of November 2025.

Rules 600(b)(89)(iv), 600(b)(93) and 603(b)(3) (with respect to the requirement that the effective national market system plans to disseminate consolidated information shall provide for the dissemination of all consolidated information for an individual NMS stock through an exclusive SIP, and that the exclusive SIPs must represent quotation sizes in such consolidated information in terms of the number of shares, rounded down to the nearest multiple of a round lot): The first business day of November 2025.

Rule 610: The first business day of November 2025.

Rules 600(b)(69) and 603(b)(3) (with respect to the requirement that every national securities exchange on which an NMS stock is traded and national securities association must make available to the exclusive SIPs all data necessary to generate odd-lot information, and the collection, consolidation and dissemination of odd-lot information by the exclusive SIPs): The first business day of May 2026.

A. Final Rule 612 Compliance Date

In the Proposing Release, the Commission detailed a staggered implementation period that would cover five quarters for the proposed amendments to Rule 612. The Commission proposed the implementation period to provide the market and market participants with time to implement the proposed variable minimum pricing increments as well as to facilitate an orderly transition. The adopted amendments to Rule 612 are modified from those that were proposed. Accordingly, the Commission is adopting a modified implementation schedule and compliance date.

One commenter suggested that the Commission direct the SROs to develop a phased implementation schedule for the reduced minimum pricing increment, “[c]onsistent with the prior implementation of decimalization” and described several steps to be considered

in an implementation plan.⁹⁵⁴ Because the amendments to Rule 612 have been modified to require the addition of only one minimum pricing increment, the compliance date discussed below will provide the SROs and other market participants sufficient time to implement the changes and a further phased implementation schedule is unnecessary. The move to decimalization in 2000–2001 was more complicated as it involved changes to SRO rules that specified several different increments that were fractions of a dollar and required systems changes to accommodate decimals instead of fractions.⁹⁵⁵ The amendment to Rule 612 will be less complicated because it will not require changes to SRO rules and the systems that are in place today, while needing updates, already can accommodate sub-penny increments. Further, the amendments adopted require less changes than what were proposed.

The amendments to Rule 612 will require the primary listing exchanges to evaluate each NMS stock during an Evaluation Period to calculate their TWAQS and the primary listing exchanges will have to provide a minimum pricing increment indicator to the exclusive SIPs for dissemination. The Evaluation Periods will be conducted on a semiannual basis, rather than a quarterly basis as proposed. Further, the amendments will require market participants to update and modify their systems, such as order handling and processing systems, to accommodate the one new minimum pricing increment, rather than the three new minimum pricing increments that were proposed. Market participants’ systems will have to be updated and modified to accommodate the assignment of minimum pricing increments for quotes and orders priced \$1.00 or greater to each NMS stock on a semiannual basis, rather than a quarterly basis as proposed. The systems updates necessary for implementing the amendment to Rule 612 are less burdensome than what was proposed.

The Commission has considered the systems changes that will be necessary to implement the amendments to Rules 600(b)(89)(i)(F) and 612 and is assigning the compliance date for amended Rule 612 to be the first business day of November 2025. In determining this compliance date, the Commission considered the systems changes that

must be completed and the date by which the TWAQS can be calculated during an Evaluation Period after the systems changes could be completed. This compliance date is sufficient for facilitating an orderly transition to the amended Rule 612.

B. Final Rule 610 Compliance Date

The Commission proposed that compliance with the amendments to Rule 610 would have occurred during the implementation period proposed for the amendments to Rule 612, discussed above.⁹⁵⁶ The proposed access fee caps would have also had a staggered implementation to reflect the proposed implementation of the proposed minimum pricing increments. Specifically, compliance with the proposed 10 mils access fee cap would have been at the same as the proposed \$0.005 minimum pricing increment, and compliance with the proposed 5 mils access fee cap would have been at the same time as the proposed \$0.001 minimum pricing increment.⁹⁵⁷

As described above, the Commission has modified amendment to Rule 612 and has also modified the compliance date for the Rule 612 amendments. Further, the Commission has modified the amendment to Rule 610 such that the access fee cap structure is retained and only the level of the caps has been reduced. The Commission is reducing the access fee caps under Rule 610 to accommodate the new pricing increments as well as to address distortions in the market associated with fee and rebate models.⁹⁵⁸ Accordingly, the Commission is modifying the compliance date for the final Rule 610 amendments to coincide with the compliance date for Rule 612. The national securities exchanges will have to file proposed rule changes with the Commission pursuant to section 19(b) and rule 19b–4⁹⁵⁹ to adjust their fee schedules to reflect the new lower access fee caps. Further, the national securities exchanges will have to file proposed rule changes to adjust any fee or rebate that is not determinable at the time of execution.

The Commission is adopting a first business day of November 2025 compliance date for the amendments to Rule 610. This date provides the national securities exchanges with time to assess their fee schedules and file proposed rule changes pursuant to section 19(b) and rule 19b–4 to adjust

Commission consider the interaction between the proposed rules and other recent Commission rules. In determining compliance dates, the Commission considers the benefits of the rules as well as the costs of delayed compliance dates and the potential overlapping compliance dates. For reasons discussed throughout the release, to the extent that there are costs from overlapping compliance dates, we expect the benefits of the rules to justify such costs. See *infra* section VII.D.6 for a discussion of the interactions of the final rules with certain other Commission rules.

⁹⁵⁴ See FIF Letter at 2, 8.

⁹⁵⁵ For a description of the move to decimalization, see Staff Decimalization Report, *supra* note 26.

⁹⁵⁶ See Proposing Release, *supra* note 11, at 80284.

⁹⁵⁷ See Proposing Release, *supra* note 11, at 80284 n.249.

⁹⁵⁸ See *supra* section IV.D.1.

⁹⁵⁹ See 15 U.S.C. 78s(b); 17 CFR 240.19b–4.

their fee schedules in order to comply with Rule 610 as amended.

C. Final Compliance Date for Round Lot and Odd-Lot Information

In the Proposing Release, the Commission proposed to require compliance with the odd-lot information and round lot definitions, including, as required under proposed Rule 603(b), that national securities exchanges and associations make the data available to the exclusive SIPs, that the exclusive SIPs represent quotation sizes in consolidated information in terms of the number of shares, rounded down to the nearest multiple of a round lot, and that the exclusive SIPs disseminate odd-lot information as defined in Rule 600(b)(69)⁹⁶⁰ 90 days from **Federal Register** publication of any Commission adoption of an earlier implementation of the round lot and odd-lot information definitions.⁹⁶¹ The Commission explained that the proposed compliance date would significantly move up the date by which round lot and odd-lot information would be more widely available in the national market system.⁹⁶²

Several commenters raised concerns about the proposed compliance date, stating that 90 days was not enough time to implement the round lot and odd-lot information definitions.⁹⁶³ In stating that a longer timeframe was needed, some commenters stated their views of the challenges entailed in implementing the changes.⁹⁶⁴ One commenter stated, “[t]he technical and operational requirements to implement the definition changes will necessitate distinct product changes in the systems of literally hundreds of exchanges, vendors, and subscribers, each with different development priorities and system capabilities.”⁹⁶⁵ The commenter stated that 90 days would not be enough time for the exclusive SIPs, data vendors and subscribers to accommodate the changes, and cautioned that “hastily made changes or missed delivery dates could result in not just a failure to provide odd-lot quotation data but also disrupt the flow of other core data to the

market.”⁹⁶⁶ The commenter urged the Commission not to adopt the 90-day compliance timeframe and instead, after adoption of the Proposing Release, allow time for industry consultation to develop an implementation plan.⁹⁶⁷ Two commenters, while supporting the odd-lot information definition adopted in the MDI Rules, recommended only implementing the BOLO due to the complexity and time it would take to implement the odd-lot information definition by many market participants.⁹⁶⁸

Three commenters suggested an implementation timeframe of at least one year.⁹⁶⁹ One commenter explained that the changes to the round lot definition would require programming changes by the exclusive SIPs and the market participants that receive SIP data, as well as testing of the changes at the exchanges, exclusive SIPs and customer levels,⁹⁷⁰ and that it would likely take longer than one year for the exclusive SIPs and exchanges to implement the proposed odd-lot changes.⁹⁷¹ The Operating Committees for the Equity Data Plans stated that the implementation timeframe for the exclusive SIPs would likely extend beyond one year due to, among other things, “the time needed for system design, [to] procure necessary equipment, and accommodate industry testing.”⁹⁷² Another commenter stated that the proposed 90-day timeframe was too aggressive, did not consider “technical realities,” and suggested an implementation period of at least one year.⁹⁷³

In light of the comments, the Commission is modifying the compliance date for the round lot and odd-lot information definitions. For implementation of the round lot definition⁹⁷⁴ and the round lot indicator,⁹⁷⁵ the compliance date will be the first business day of November 2025. The Commission calculated this deadline based on two main factors. First, the compliance date is

approximately 12 months after the effective date, which is consistent with what commenters suggested was necessary for systems changes and testing. Second, the compliance date provides sufficient time for any exchanges that have defined round lots in their rules to file proposed rule changes pursuant to section 19(b) of the Exchange Act⁹⁷⁶ and rule 19b-4⁹⁷⁷ thereunder to reflect the new round lot definition.⁹⁷⁸

The compliance date for the odd-lot information definition⁹⁷⁹ and Rule 603(b)(3) (with respect to the requirement that every national securities exchange on which an NMS stock is traded and national securities association must make available to the exclusive SIPs all data necessary to generate odd-lot information, and the collection, consolidation and dissemination of odd-lot information by the exclusive SIPs) will be the first business day of May 2026, which is approximately 18 months after the effective date of the Adopting Release. The Commission is providing a modified compliance date for the odd-lot information definition, consistent with what industry comment suggested was necessary for technical and operational requirements,⁹⁸⁰ due to several factors. First, the exclusive SIPs will likely have to make more changes to their systems to accommodate the odd-lot information definition than to implement the round lot definition. Specifically, the exclusive SIPs will need to collect more data, consolidate it, and disseminate it as odd-lot information. In addition, the exclusive SIPs will need to calculate and disseminate the BOLO. The Commission continues to believe that both the changes to the odd-lot information definition and the dissemination of the BOLO are independently important, and the additional time allotted to comply with the odd-lot information definition addresses the concerns from commenters regarding the complexity or operational risks that may arise with making odd-lot information changes in a compressed timeline. Second, the effective national market system plan(s) may also need to assess whether plan amendments will be necessary to conform such plans to the odd-lot information definition, and to file any such amendments with the Commission

⁹⁶⁰ See *supra* note 719.

⁹⁶¹ See Proposing Release, *supra* note 11, at 80300; see *id.* at n.399 and accompanying text.

⁹⁶² See Proposing Release, *supra* note 11, at 80298.

⁹⁶³ See, e.g., NYSE Letter I at 7–8; CTA, CQ, UTP Plans Operating Committees Letter at 3; MEMX Letter at 7; FISD Letter at 2, 3, 4; Nasdaq Letter I at 3; Cboe Letter II at 11; FIF Letter at 14; Cboe Letter III at 10 n.18. See also Fidelity Letter at 16.

⁹⁶⁴ See, e.g., NYSE Letter I at 7–8; CTA, CQ, UTP Plans Operating Committees Letter at 2, 3; FISD Letter at 2, 3, 4; FIF Letter at 14; Cboe Letter II at 11.

⁹⁶⁵ See FISD Letter at 3.

⁹⁶⁶ *Id.*

⁹⁶⁷ See FISD Letter at 4. The commenter stated that the Operating Committees of the Equity Data Plans considered a 10–12 month implementation process in their proposal to add odd-lot data to the exclusive SIP feeds. *Id.*

⁹⁶⁸ See BlackRock Letter at 12. See also MEMX Letter at 7.

⁹⁶⁹ See NYSE Letter I at 8; CTA, CQ, UTP Plans Operating Committees Letter at 3; Nasdaq Letter I at 3.

⁹⁷⁰ See NYSE Letter I at 7.

⁹⁷¹ See NYSE Letter I at 8.

⁹⁷² CTA/CQ/UTP Plans Operating Committees Letter at 2, 3.

⁹⁷³ See Nasdaq Letter I at 3.

⁹⁷⁴ Rule 600(b)(93).

⁹⁷⁵ Rule 600(b)(89)(i)(E) and Rule 600(b)(89)(iv).

⁹⁷⁶ 15 U.S.C. 78s(b).

⁹⁷⁷ 17 CFR 240.19b-4.

⁹⁷⁸ See Proposing Release, *supra* note 11, at 80300 n.408.

⁹⁷⁹ Rule 600(b)(69).

⁹⁸⁰ See *supra* notes 969 and 973 (suggesting an implementation process of approximately one year).

pursuant to rule 608. Finally, market participants may need to update their systems that accept SIP data to reflect odd-lot information.

Accordingly, extending the compliance deadlines for the implementation of the round lot and odd-lot information definitions will address the concerns raised by commenters and provide additional time for market participants to make the changes necessary to implement the definitions.

VII. Economic Analysis

A. Introduction

The most common method of trading in NMS stocks by registered exchanges today is the limit order book matching system, a mechanism that securities exchanges use to bring together orders of multiple buyers and sellers of securities and have those orders interact. It acts as a central hub where participants' priced buy and sell orders can be ranked, displayed, and matched based on programmed rules established by the providing registered exchange. As such, the limit order book matching system facilitates efficient and competitive markets.⁹⁸¹

Imagine an order book in which a buyer's or seller's order could be displayed at any pricing increment, no matter how small. In this scenario, assume a liquidity provider wants to buy a stock. The provider sees the book with the prices at which others are willing to buy. Because in this hypothetical market there are no restrictions on an entry price point, the liquidity provider can jump ahead of those other providers by offering to buy at a price that is infinitesimally higher. This is what is known as "pennying."⁹⁸² The problem with pennyning is that it creates a disincentive for liquidity providers to post buy or sell orders, because they know that a second trader can step ahead with an infinitesimally better price. This leads to lower priced offers to buy and higher priced offers to sell—namely a wider quoted bid-ask spread.

Recognizing this market failure, the Commission in 2005 adopted⁹⁸³ a market-wide requirement that venues could not display, rank, or accept orders in increments less than a penny.⁹⁸⁴ The

2005 adoption of Rule 612 limited the scope of pennyning, but it did so at the inevitable cost of introducing a floor, namely one cent, below which the quoted bid-ask spread could not fall.

Though a minimum tick is necessary, placing a floor on the spread introduces distortions into the market. The price of liquidity will be artificially high for some stocks, leading to a surplus, similar to a goods market for which prices were artificially high. This creates rents which accrue to some market participants at the expense of others. By reducing the minimum pricing increment for a defined subset of stocks, the adopted amendments to Rule 612 free the price of liquidity from its current constraint, allowing it to approach its natural level. At the same time, as described in greater detail below, the adopted amendments maintain a minimum (but smaller) pricing increment necessary for the proper functioning of financial markets' limit order books.

Freeing the spread from the binding constraint of one penny will bring a number of benefits, including lower transaction costs. For some stocks currently constrained at a penny, the spread will, under the amended rules, at times be a half-penny, a substantial reduction in the quoted price of accessing liquidity. This reduction, while beneficial, brings into the spotlight the cap on the access fee, which has been 0.30 cents. Absent a reduction in the maximum access fee, a round-trip buy and sell for stocks quoted at the new half-penny tick would require paying more in fees (0.60 cents) than in the spread itself (0.50 cents).

The practice of charging at or near the access fee cap has persisted over time. Regulation NMS establishes the NBBO. Because the NBBO is protected,⁹⁸⁵ many exchanges charge the maximum amount allowed to access the quote. This allows the exchange to subsidize liquidity providers with a rebate, reducing spreads (to acquire more volume, due to traders' need to access the protected quote). While the quoted spread may be lower, the cost to investors is not; this is because gains from the lower spread are counteracted by the access fee. On the other hand, the high access fee and

rebate can lead to a loss of price coherence when the spread is less than twice the fee. For stocks that remain tick constrained, as some may, the rebate distorts the supply of liquidity. Finally, fees and rebates that are high as a percentage of the quoted spread introduce complexity, and potential conflicts of interest. Lowering the access fee to 10 mils restores price coherence and alleviates these costs.

The Commission is also requiring that these fees and rebates be determinable at the time of trade execution. Opacity and complexities in current exchange fees and rebates make these more distortive than otherwise.⁹⁸⁶ With new Rule 610(d), the Commission is taking an incremental step in ameliorating the opacity in fees and rebates, reducing information asymmetries and lessening the potential for agency conflict between brokers and their customers.

Finally, the Commission has accelerated the implementation of the round lot, and odd-lot information definitions while providing more time for the necessary systems changes to implement the definitional changes than what was proposed. These amendments will allow the benefits of these rules to accrue to market participants in a timely manner.

Below, we explain why these amendments increase efficiency and competition and bring benefits that will accrue to the broad range of participants in U.S. equity markets. We also discuss the costs of these amendments. The Commission has considered the economic effects of the amendments and, wherever possible, the Commission has quantified the likely economic effects of the amendments.⁹⁸⁷ The Commission is providing both a qualitative assessment and quantified estimates of the potential economic

⁹⁸⁶ As discussed in sections VII.D.2, VII.D.3, and VII.E.1, fees and rebates create a potential conflict for a broker in situations where transaction fees, which are paid by the broker, potentially conflict with execution quality, which is incurred by the customer. This conflict, if acted on, can lead to inefficient order routing and worse transaction outcomes for customers; it can also lead to an inefficient incorporation of information into stock prices, harming market efficiency.

⁹⁸⁷ Section 3(f) of the Exchange Act requires the Commission, whenever it engages in rulemaking and is required to consider or determine whether an action is necessary or appropriate in the public interest, to consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation. Additionally, section 23(a)(2) of the Exchange Act requires the Commission, when making rules under the Exchange Act, to consider the impact such rules will have on competition. Exchange Act section 23(a)(2) prohibits the Commission from adopting any rule that would impose a burden on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act.

⁹⁸¹ See Anthony Clarke, *Demystifying the Central Limit Order Book (CLOB): Everything You Need to Know* (Apr. 21, 2023), available at <https://www.nasdaq.com/articles/demystifying-the-central-limit-order-book-clob-everything-you-need-to-know>.

⁹⁸² See *supra* section I.A.1.

⁹⁸³ See generally, Regulation NMS Adopting Release, *supra* note 4.

⁹⁸⁴ Specifically, preexisting Rule 612 of Regulation NMS prohibited a national securities

exchange, national securities association, ATS, vendor, or broker or dealer from displaying, ranking, or accepting quotations, orders, or indications of interest in any NMS stock priced in an increment smaller than \$0.01 if the quotation, order, or indication of interest is priced equal to or greater than \$1.00 per share. If the quotation, order, or indication of interest is priced less than \$1.00 per share, the minimum pricing increment is \$0.0001.

⁹⁸⁵ See *supra* note 42 and accompanying text discussing and defining protected quotes.

effects of the amendments where feasible. The Commission incorporated data and other information to assist it in the analysis of the economic effects of the amendments. However, as explained in more detail below, the Commission is unable to quantify certain economic effects because the Commission does not have, and in certain cases cannot reasonably obtain, data that may inform the Commission on certain economic effects. Further, even in cases where the Commission has data, it is not practicable to quantify certain economic effects due to the number and type of assumptions necessary, which render any such quantification unreliable. Our inability to quantify certain costs, benefits, and effects does not imply that such costs, benefits, or effects are less significant.

B. Broad Economic Considerations

1. Liquidity and Spread

A key component of market liquidity is the limit order book. Liquidity providers submit limit orders to buy (“bid”) and sell (“ask”) stock at specified prices and quantities. Liquidity demanders trade against these limit orders. The quoted (bid-ask) spread for a stock is the difference between the lowest displayed ask price and the highest displayed bid price.⁹⁸⁸ As discussed in the Proposing Release, standard economic theory suggests that liquidity providers in a competitive market will compete to provide liquidity until the spread—*i.e.*, their compensation for providing liquidity—is equal to the break-even point given the costs of liquidity provision.⁹⁸⁹ Absent fees, rebates, and a minimum pricing increment, this break-even point for liquidity provision represents the lowest bid-ask spread at which liquidity providers (as a whole) are willing to provide liquidity (hereinafter “economic spread”).⁹⁹⁰

⁹⁸⁸ Investors can also execute trades on other “dark” venues that do not display quotes. But because quotes are not displayed on these venues, the investor could not be certain of the execution price or of the number of shares available. See Proposing Release, *supra* note 11, at 80287 (addressing trading centers that do not display protected quotes).

⁹⁸⁹ Proposing Release, *supra* note 11, at 80309 n.483. See also Jonathan Brogaard & Corey Garriott, *High-Frequency Trading Competition*, 54 J. Fin. & Quantitative Analysis 1469 (2019) (documenting that as more high-frequency liquidity providers enter the market, spreads decrease until they converge to competitive levels).

⁹⁹⁰ Although the Proposing Release did not use the phrase “economic spread,” the release employed the same concept in multiple places. See, e.g., Proposing Release, *supra* note 11, at 80317 (“In a competitive market, and in the absence of rebates or other price distortions, the prevailing bid or ask price would be the feasible price equal to just worse

2. Economics of Minimum Pricing Increments

When a market has a minimum pricing increment (hereafter “tick sizes” or just “ticks”), liquidity providers quote bid and ask prices that are discrete whole number multiples of that tick. For example, if the tick is a penny, then a liquidity provider quotes prices that are a multiple of a penny, such as \$10.00 or \$10.01, but not \$10.015. There may, however, be a liquidity provider willing to quote an ask of \$10.015 and a bid of \$10.005. Were this liquidity provider to be allowed to do so, the stock would have a spread \$0.01 (*i.e.*, the difference between the lowest ask price and bid price). However, in the presence of the \$0.01 tick, liquidity providers will quote at the best feasible ask price above \$10.015, which is \$10.02, and the best feasible bid price below \$10.005, which is \$10.00.⁹⁹¹ Consequently, the stock’s quoted spread would be \$0.02 instead of \$0.01, twice as wide than it would otherwise be.

Tick sizes present an economic tradeoff. As discussed in the Proposing Release, in determining what tick size is optimal for any given stock, there is a tradeoff between price competition on one hand, and incentives for liquidity provision on the other.⁹⁹² A smaller tick allows liquidity providers to better compete on price which can lead to

than the price that equates liquidity supply and demand.”). In a number of places where the release employed the concept of economic spread, it arose in discussions about a stock that would trade at a given price or spread absent the tick size. See Proposing Release, *supra* note 11, at 80304, 80309, and 80317. The spread is composed of several elements: adverse selection, inventory risk, and processing costs. See Proposing Release, *supra* note 11, at 80304 n.447 and 80321. See generally, Roger D. Huang & Hans R. Stoll, *The Components of the Bid-Ask Spread: A General Approach*, 10 Rev. Fin. Stud. 995 (Winter 1997). As explained in the Proposing Release, *supra* note 11, at 80304 and n.447, the spread is unlikely to ever be zero due to inventory costs, adverse selection risks, the direct costs associated with providing liquidity, and trading rules meant to prevent the locking and crossing of markets. See P.C. Kumar, *Bid-Ask Spreads in U.S. Equity Markets*, 43 Q. J. Bus. & Econ 85 (2004).

⁹⁹¹ As discussed in the Proposing Release, *supra* note 11, at 80309 nn.483–484 and accompanying text, this assumes that stock prices are expected to revert to the next worse level. This may occur because standard economic theory suggests that in a competitive market liquidity providers will compete to provide liquidity until the spread—*i.e.*, their compensation for providing liquidity—is equal to the break-even point for liquidity provision. See also Jonathan Brogaard & Corey Garriott, *High-Frequency Trading Competition*, 54 J. Fin. & Quantitative Analysis 1469 (2019) (documenting that as more high-frequency liquidity providers enter the market, spreads decrease until they converge to competitive levels). The range of infeasible quoting prices narrows somewhat in the presence of rebates for liquidity providers. section VII.B.3 discusses these effects.

⁹⁹² Proposing Release, *supra* note 11, at 80305.

narrower spreads, reducing costs for investors. On the other hand, a smaller tick can also lead to pennyning. Pennyning increases adverse selection costs for slower liquidity providers by making it more likely that they trade when prices are moving in an unfavorable direction relative to their positions.⁹⁹³ To compensate for these costs, liquidity providers may post less aggressive quotes—lower bid prices and higher ask prices—resulting in a wider quoted spread and worse liquidity.⁹⁹⁴ Both price competition and adverse selection from pennyning lie on a continuum.⁹⁹⁵ As explained in *infra* section VII.D.1, the degree to which pennyning versus price competition dominates in determining whether increasing the tick will improve market quality depends on the relation between the tick and the spread. The greater the tick is in relation to the spread, the greater the effect of price competition, and the lower the risk of pennyning.⁹⁹⁶ Accordingly, the Commission defines a stock to be tick-constrained if there is a reasonable probability that the stock would otherwise trade with a spread less than the tick size in the course of normal trading, were it allowed to do so, or one for which the tick is a substantial portion of the quoted spread.⁹⁹⁷ That is,

⁹⁹³ *Id.*, at 80305 n.481 and accompanying text.

⁹⁹⁴ *Id.* at 80305–06. Pennyning is defined in the Proposing Release as occurring when a market participant gets to the front of the limit order queue by posting economically trivial price improvement. *Id.* at 80306 n.459. One commenter also described the economics of pennyning using option theory and the Commission agrees with this characterization. See Harris Letter at 6. According to the commenter, pennyning results in a payoff structure that has unlimited potential upside while the downside is capped. By pennyning, a fast trader jumps to the front of the queue and therefore has a high chance of executing his trade and capturing the upside if prices move favorably. If prices move in an unfavorable direction, the fast trader can unwind his position against the slower liquidity supplier (whom he undercut); in this case, the cost to the fast trader—*i.e.*, the cost of the option—is only one tick. The fast trader thereby captures value from the liquidity supplier and hence discourages slow traders from offering liquidity. A small tick means that the cost of pennyning is low, which results in more pennyning and thus less incentive for liquidity provision. See also Lawrence E. Harris, *Minimum Price Variations, Discrete Bid-Ask Spreads, and Quotation Sizes*, 7 Rev. Fin. Stud. 149 (1994); Anne Dyhrberg, et al., *When Bigger is Better: The Impact of a Tiny Tick Size on Undercutting Behavior*, 58 J. Fin. & Quantitative Analysis (2023) (Dyhrberg et al.).

⁹⁹⁵ Proposing Release, *supra* note 11, at 80305 n.458.

⁹⁹⁶ See *infra* section VII.D.1.b.i.

⁹⁹⁷ The Commission’s definition of tick-constrained in this release eliminates an unnecessary distinction drawn between tick-constrained and near-tick-constrained stocks that appears in the Proposing Release. Specifically, in the Proposing Release’s economic analysis, the Commission stated that it considered the term “tick-constrained” to apply to “stocks that would

Continued

while tick constrained stocks are not the only ones to potentially benefit from a reduction in the tick size, they are the ones most clearly likely to do so.⁹⁹⁸

Benefits from a reduction in the tick size come in the form of higher market quality and lower transaction costs to investors. As explained above, relaxing the tick constraint (the price floor on liquidity) directly allows competition for market orders. Moving toward a more competitive market reduces distortions and economic rents.

As a general matter, a liquidity provider is incentivized to get its quote to the front of the queue (*i.e.* establish price/time priority on an order book).⁹⁹⁹ This is because stock exchange priority rules give greater priority to better priced orders and generally factor order entry time into the priority of limit orders at the same price. When the NBBO is equal to the tick, liquidity providers cannot establish price priority (other than by crossing the spread)¹⁰⁰⁰

otherwise trade with a spread less than the tick size, were they allowed to do so.” Proposing Release, *supra* note 11, at 80304. That economic analysis also stated that a “near-tick-constrained” stock was “one that has a reasonable probability of becoming tick-constrained in the course of normal trading, or one for which the tick is a substantial portion of the spread.” *Id.* Given the economics of minimum pricing increments discussed in this section, distinguishing near-tick-constrained stocks from tick-constrained stocks is unnecessary. The Proposing Release’s discussion of these terms in its economic analysis did not meaningfully differentiate between the effects on stocks in each of these groups. As a result, applying the singular term tick-constrained avoids confusion and streamlines the discussion. In addition, the Proposing Release’s empirical analysis employed separate numerical definitions for tick-constrained and near-tick-constrained stocks. *Compare id.* at 80268 n.17 (tick-constrained stocks are those with a Time Weighted Average Quoted Spread less than .011) with *id.* at 80304 n.449 (near-tick-constrained stocks are those with a Time Weighted Average Quoted Spread between .011 and .02). These numerical definitions served as proxies for drawing distinctions in the Proposing Release’s empirical analysis. *See, e.g., id.* at 80304 nn.448–449; at 80308 n.473 and accompanying text; and at 80319 n.549. Although we continue to include specific explanations of what stocks are included in each of our quantitative analyses where relevant, to further simplify the discussion in the economic analysis, we do not use the definitions employed in the empirical analysis more broadly.

⁹⁹⁸ See Proposing Release, *supra* note 11, at 80309 and the discussion accompanying nn.474–477. *See also* CCMR Letter at 18 (“an MPI that is too wide may set an artificial constraint on permissible bids and offers, which can result in an unnecessarily wide spread that can also increase transaction costs for investors”).

⁹⁹⁹ Material presented in this paragraph was discussed in the Proposing Release, *supra* note 11, at 80309 and nn.478–481.

¹⁰⁰⁰ “Crossing the spread” refers to switching from posting a (non-marketable) limit order to sending a market order. For example, if the national best bid were \$10.00 and the national best offer were \$10.02, a limit order to buy, if executed, would entail paying \$10.00 for the security. However, a market order to buy would entail pay \$10.02, in other words, it would have crossed the

because there are no price points at which to do so.¹⁰⁰¹ Because liquidity providers cannot establish price priority when the NBBO spread is one tick, establishing time priority becomes more important.¹⁰⁰² Consequently, an environment where stocks are tick-constrained with artificially wider spreads and longer order queues tends to favor traders who are better able to establish positions more quickly so they can be at the front of the queue. Traders who are at the back of the queue face slower executions and the risk of not being executed against at all (a lower fill rate). In the latter case, they will need to resubmit an order when the market has moved in an unfavorable direction, increasing transaction costs. Adverse selection amplifies these costs: the orders of slower traders are most likely to be executed when such an execution is unfavorable to them and least likely when they would be favorable. For example, a sell order at the back of the queue will tend to be filled when there are many buy orders, which tend to increase the price, implying that selling is disadvantageous.

To summarize, current wider quoted spreads mean greater cost to liquidity demanders and greater revenue to liquidity providers.¹⁰⁰³ An artificially

spread of \$0.02. In the most common case of maker-taker, the difference between the market and limit order is even greater because the buyer using a market order would pay \$10.02 plus the fee, whereas the buyer using a limit order would pay \$10.00 minus the rebate.

¹⁰⁰¹ The liquidity provider could submit an order at an inverted exchange, though this is an inefficient solution. *See* section VII.C.2.c.

¹⁰⁰² Under typical exchange rules, an order with time priority is executed first when multiple orders are at the best price, regardless of how many orders are at the best price. In longer order queues, liquidity-providing orders deeper in the queue, which do not have time priority, are less likely to be filled in a timely manner and, conditional on being filled, the probability of the order having been adversely selected tends to be greater compared to orders with greater fill priority. Typically, liquidity providers compete to gain priority over other resting orders by quoting a better price, but tick-constraints make doing so difficult. In the case when the spread is constrained to a single tick, it would be impossible to improve on the displayed price without locking markets. For tick-constrained stocks, when the quoted spread may be greater than a single tick, improving the price by an entire tick may be too much in the sense that doing so may narrow the spread beyond what the liquidity providers could tolerate. A narrower tick de-emphasizes time priority on a stock exchange by making it easier to compete on price. *See* Edwin Hu, et al., *Tick Size Pilot and Market Quality* (DERA White Paper, Jan. 31, 2018), available at https://www.sec.gov/dera/staff-papers/white-papers/dera_wp_tick_size-market_quality; and Todd G. Griffith & Brian S. Roseman, *Making Cents of Tick Sizes: The Effect of the 2016 U.S. SEC Tick Size Pilot on Limit Order Book Liquidity*, 101 J. Banking Fin. 104 (2019).

¹⁰⁰³ Market participants can use inverted exchanges or ISOs to help ameliorate some of the negative effects of tick size constraints.

wide spread, due to a price floor imposed by the tick constraint, effectively subsidizes liquidity provision. Because there is an increased incentive to provide liquidity via limit orders, queues of limit orders tend to be longer, and wait times to get a limit order executed also tend to be longer. This makes it more likely that the market moves away from an investor’s limit order and leads to lower overall fill rates for limit orders.¹⁰⁰⁴ Thus the floor on liquidity leads to rents accruing to fast liquidity providers¹⁰⁰⁵ at the expense of slower ones as well as liquidity demanders.¹⁰⁰⁶

3. Economics of Access Fees

Trading venues can choose to charge an access fee, or pay a rebate, to their participants—liquidity providers and liquidity takers—who trade at their venue. The trading venue can further choose to levy the fee (or pay the rebate) on either the liquidity taker or liquidity provider, or on both. As discussed in *infra* section VII.C.2.b, the most common fee structure is maker-taker, in which liquidity takers are assessed an access fee and liquidity providers are paid a rebate, which is typically funded through the access fee. That is, for a buy order the liquidity taker pays the price plus the access fee. For a sell order, the liquidity taker receives the price, less

¹⁰⁰⁴ *See, e.g.,* Barbara Rindi & Ingrid M. Werner, *U.S. Tick Size Pilot* (working paper Mar. 4, 2019), available at <https://ssrn.com/abstract=3041644> (retrieved from SSRN Elsevier Database); Mao Ye & Chen Yao, *Tick Size Constraints, Market Structure and Liquidity* (working paper Dec. 26, 2019), available at <https://ssrn.com/abstract=2359000> (retrieved from SSRN Elsevier database); Phil Mackintosh, *Why Ticks Matter*, NASDAQ (May 19, 2022), available at <https://www.nasdaq.com/articles/why-ticks-matter>; and MEMX, *Tick-Constrained Securities* (Aug. 2021) (“MEMX Report”), available at <https://memx.com/wp-content/uploads/MEMX-Market-Structure-Report-Tick-Constrained-Securities.pdf>.

¹⁰⁰⁵ This phenomenon is sometimes referred to as excessive intermediation. In this context, excessive intermediation refers to excessive quoting in sufficiently liquid securities in order to profit from the tick-constraint-induced price floor on liquidity, which crowds out investors from being able to supply liquidity. Such price floors can increase quoting activity from high-frequency traders looking to earn the artificially high spread. Because profiting off of the spread is easiest when the marketable orders filled are small, obtaining high priority in the queue at each tick is essential to such strategies. High-frequency, proprietary traders are generally better able to obtain such priority, and consequently investors may have less opportunity to profitably fill their trades using limit orders. Rebates on limit orders further increase the incentives of these traders to engage in such intermediation, thereby exacerbating the problem.

¹⁰⁰⁶ In support of this point, one commenter stated that the subsidization of liquidity providers resulting from the tick constraint leads to greater competition on the basis of speed to provide liquidity, which increases complexity and related costs to investors; *See* Budish Letter at 4.

the fee. Assuming the broker-dealer is the principal to the trade, then the economic price of accessing or providing liquidity would be equivalent to the displayed nominal price net of the applicable fees. If the broker-dealer is an agent, then there maybe a wedge between economic price of accessing or providing liquidity and the price net of the fee and rebate. It is possible that the fee and rebate may be passed on directly to the customer. The fee and rebate may be passed on indirectly and in part through fees, commissions, or as part of a bundle of services to the customer.

Section VII.C.2 describes the current market structure as it relates to access fees and rebates. A key feature of the current market structure is that many exchanges charge at the current cap and pay out nearly all of the fee as a rebate. For this reason, in practice the Commission expects access fees to be near the cap under the amended rule, just as they are near the pre-existing cap under the current structure. As discussed in the Proposing release, several basic economic considerations are among those governing the analysis of access fees. First, access fees should be such that net and quoted prices satisfy coherence.¹⁰⁰⁷ Second, under simplifying assumptions, fees and rebates are approximately neutral provided that the stock is not tick constrained,¹⁰⁰⁸ although outside of those simplifying assumptions lowering the access fee cap can have additional benefits as discussed in section VII.D.2.d. Finally, for tick constrained stocks, access fees and rebates can distort liquidity supply and demand, increasing transaction costs for investors.¹⁰⁰⁹

In response to the Proposing Release, the Commission received extensive

comment regarding the role of fees and rebates on the supply of and demand for liquidity.¹⁰¹⁰ Below, to address comments, the Commission supplements its discussion on how access fees and fee-funded rebates may affect trading in the presence of the commonly used maker-taker fee structure.¹⁰¹¹ This section addresses certain aspects of fees and rebates in developing a basic framework for evaluating the principle economic effects and responding to comments. The remaining aspects and effects are considered in sections VII.C.2, VII.D.2, and VII.D.3.

¹⁰¹⁰ Specifically, commenters had different views on whether reducing access fees and rebates will adversely affect the provision of liquidity on exchanges, either generally or for particular categories of stocks. *Compare* Cboe Letter II at 9; Cboe Letter III at 6, 8; Cboe Letter IV at 3, 5; CCMR Letter at 27; IEX Letter I at 2; IEX Letter IV at 18, 21; IEX Letter V at 4; IEX Letter VI at 7; Nasdaq Letter I at 2, 20, 22, 25; Nasdaq Letter II at 3, 6; Nasdaq Letter III at 2–3; Themis Letter at 7–8; Virtu Letter II at 7–8. Commenters likewise had differing perspectives on whether reducing access fees and rebates will reduce overall transaction costs, thereby increasing demand for liquidity, or cause offsetting costs related to, e.g., wider spreads, volatility, or a less representative NBB (which could reduce demand for liquidity). *Compare* Cboe Letter III at 5–6; Cboe Letter IV at 5; CCMR Letter at 27; IEX Letter I at 26; IEX Letter IV at 16, 22–23; Nasdaq Letter I at 2, 20, 22–24; Nasdaq Letter II at 4–7; Nasdaq Letter III at 5; Themis Letter at 7; Virtu Letter II at 8. As one example of this debate, Nasdaq identifies a “vicious cycle” that could result from a reduction in the minimum access fee, whereas IEX identifies a “virtuous cycle” from the identical change. *See* Nasdaq Letter II at 6; IEX Letter I at 26. *See* section VII.D.2 for a response to these comments on the effect of the reduction in the access fee cap on liquidity and transaction costs.

¹⁰¹¹ The economic theory laid out below allows the Commission to create a common framework for the competing claims of commenters and to disentangle the complex forces at work in determining spreads. While the Commission has supplemented this discussion from the Proposing Release, the essential point in this framework—the equilibrium resulting from the supply and demand for liquidity, modified as necessary for the presence of a minimum tick—was discussed throughout the Proposing Release. *See, e.g.,* Proposing Release, *supra* note 11, at 80228–29, 80317, 80321, 80336, 80338.

a. Liquidity With Access Fees and Rebates

In the absence of ticks, the market for liquidity, discussed in section VII.B.1, may generally be represented by an economic model of supply and demand, as shown below in panel A of figure 1.¹⁰¹² The vertical axis represents the price of liquidity, here the quoted half-spread (*i.e.* because the liquidity taker is not typically on both sides of the trade, we use the quoted half-spread to measure price of liquidity¹⁰¹³), while the horizontal axis represents the quantity of liquidity.¹⁰¹⁴ Liquidity providers supply liquidity, and the supply curve is upward sloping because liquidity providers are willing to supply more liquidity when the price of liquidity is higher. Liquidity takers demand liquidity, and the demand curve is downward sloping because liquidity takers demand less liquidity at higher prices of liquidity (*i.e.*, they trade less when they have to pay higher transaction costs). The supply and demand curves intersect at the point where the amount of liquidity supplied equals the quantity demanded, which indicates the equilibrium price and quantity of liquidity in the market.

¹⁰¹² This model presents an abstraction of the market for liquidity. As explained in section VII.B.2, the willingness to quote a bid or offer depends in part on the degree of adverse selection in the market which in turn depends on the tick size. The key point in this section is that, for stocks that have a spread that is sufficiently wide, liquidity providers are indifferent between receiving compensation in the form of spread or in the form of a rebate; similarly, liquidity demanders are indifferent between paying the spread or access fee, and thus fees and rebates tend to be neutral assuming a spread that is sufficiently wide. This point is unaffected by the presence of adverse selection arising from a tick that may be too narrow.

¹⁰¹³ The price of liquidity is represented by the quoted half-spread because the half-spread represents the price which liquidity takers must pay for the immediacy of executing their trade while liquidity providers stand to capture the half-spread.

¹⁰¹⁴ Figure 1 shows the supply and demand for liquidity, with the quoted half-spread as representing the price of liquidity on the y-axis. This should not be confused with supply and demand for shares of the stock, where the price of the stock would be on the y-axis.

¹⁰⁰⁷ *See* Proposing Release, *supra* note 11, at 80348 (“Net and nominal price rankings are coherent if sorting trading venues on the competitiveness of their nominal quoted prices yields the same ordering as sorting on prices net of fees and rebates.”).

¹⁰⁰⁸ Proposing Release, *supra* note 11, at 80328.

¹⁰⁰⁹ *Id.*

Figure 1

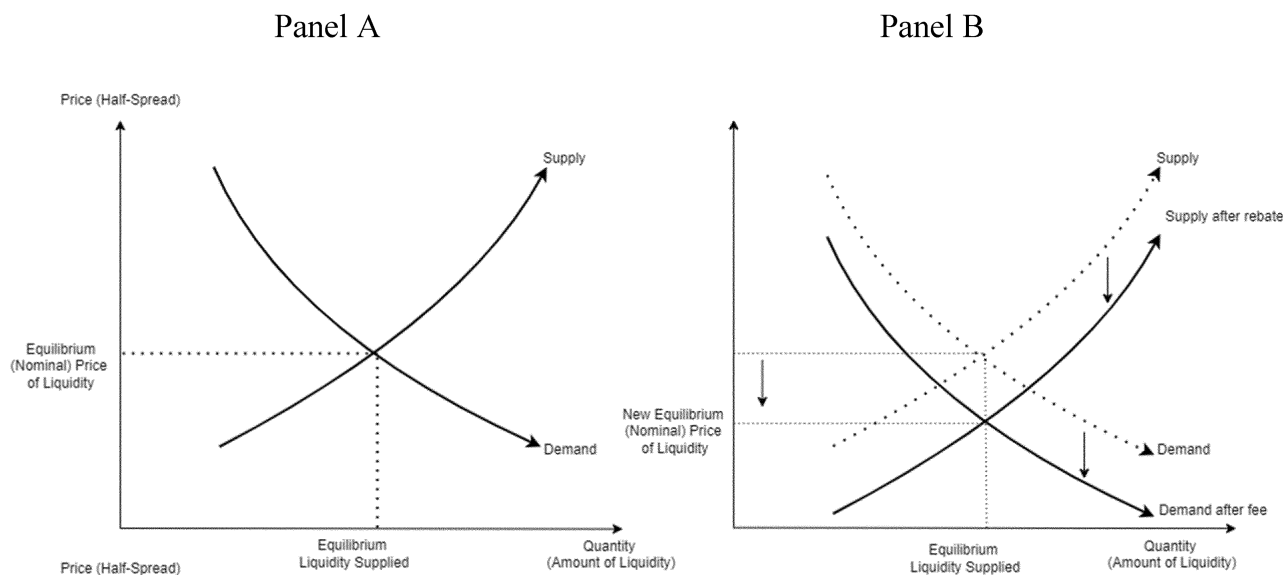


Figure 1: The above figures illustrate the market for liquidity represented by a supply curve and a demand curve.

Liquidity suppliers contribute to the supply of liquidity by posting passive orders such as limit orders, while liquidity demanders trade against the passive orders thereby taking liquidity. All other things equal, the quantity of liquidity supplied increases as the price of liquidity increases, while the quantity of liquidity demanded decreases as the price of liquidity increases. The price of liquidity is represented by the quoted half-spread because the half-spread represents the price which liquidity takers must pay for the immediacy of executing their trade while liquidity providers stand to capture the half-spread. The intersection of these curves sets the equilibrium price of liquidity (i.e., the half-spread) and the equilibrium quantity of liquidity. As demonstrated in the supply-demand diagram on the right, rebates shift the supply curve so that there is more supply for a given quoted price of liquidity. Fees increase the cost of demanding liquidity so the shift in the demand curve reflects that there will be less demand at any given price of liquidity. Because both supply and demand curves vertical shifts are parallel, they continue to intersect at the same value along the horizontal axis (the amount of liquidity supplied/demanded).

Consider next the effect on liquidity of a 30 mils access fee used to fund a 30 mils rebate.¹⁰¹⁵ With a rebate of 30 mils, liquidity providers who submit buy orders are willing to increase their bid price by 30 mils, while liquidity providers who submit sell orders are willing to lower their ask price by 30 mils. For this reason, the bid-ask spread narrows by 60 mils, and the quoted half-spread (*i.e.*, price of liquidity) narrows by 30 mils. Accordingly, in panel B of figure 1, the supply curve for liquidity shifts down by 30 mils. Likewise, the 30 mils access fee acts as a tax on liquidity takers. This means that, for the same amount of liquidity, liquidity takers will reduce the price they are willing to pay by 30 mils to account for the access fee (since their net cost to take liquidity is the price they pay plus the access fee). In panel B of figure 1, this effect is represented by the liquidity demand curve shifting down by 30 mils. Because both the supply curve and the demand curve shift down by 30 mils, they continue to intersect at the same quantity of liquidity.¹⁰¹⁶ That is, the equilibrium amount of liquidity remains unchanged, but the displayed price is 30 mils lower. The net cost to take liquidity is not affected since it equals the price of liquidity plus the 30 mils access fee;¹⁰¹⁷ similarly, the net proceeds from providing liquidity are not affected since they equal the price of liquidity plus the 30 mils rebate.¹⁰¹⁸ Thus, in the absence of frictions (*e.g.*, discrete prices, minimum pricing increments, or agency problems), the level of fees and rebates

¹⁰¹⁵ This level of access fee and rebate is similar to current fees and rebates on maker-taker lit exchanges and may vary based on pricing tier; *see infra* section VII.C.2.b. To illustrate the salient economic points, this discussion assumes that liquidity providers and demanders know what the resulting access fees and rebates from a transaction will be. As discussed below in sections VII.C.2.b and VII.D.3, in the baseline this is only ever approximately true since fees and rebates are often determined using current and future volumes. But as long as market participants are able to approximate their fees and rebates, then they will generally behave as described in this paragraph—liquidity providers will adjust their quotes on account of the expected rebate, and liquidity demanders will adjust the quoted price they are willing to pay on account of the expected fee.

¹⁰¹⁶ If the demand curve were vertical (namely if liquidity demanders were not sensitive to price), the curve would not shift. However, the conclusions would be the same in that the supply curve shift would cause the same quantity to be supplied at a lower price.

¹⁰¹⁷ The concept that net cost (or net spread) is the correct way to measure the cost of liquidity is supported by basic economics and by commenter statements. *See* Citigroup Letter at 6 (stating, “Many of CGMI’s institutional clients are increasingly measuring their execution costs all-in, inclusive of exchange fees.”).

¹⁰¹⁸ This discussion refers to the cost to take liquidity and proceeds from providing liquidity at the time of the execution of the trade.

(when fees and rebates are equal in size) does not affect the total costs of trading.¹⁰¹⁹ As one commenter put it, “when liquidity suppliers are subsidized at the cost of liquidity takers, spreads decline. If they did not, everyone would want to be a liquidity supplier, and no trade would occur. So, maker-taker pricing created narrower quoted spreads on average, but it does not affect the net cost of providing liquidity.”¹⁰²⁰

Academic work on the effect of a fee change on the Toronto Stock Exchange supports the model.¹⁰²¹ In 2005, the exchange began offering a rebate to liquidity suppliers in a pre-defined subset of securities. For securities in which the total fee remained constant but was split into a maker rebate and a taker fee, the authors find that quoted spreads narrow, but the net spread—which includes the quoted spread and the take fee—did not change.¹⁰²²

b. Liquidity With Ticks, Access Fees, and Rebates

Section VII.B.3.a shows that the quoted spread adjusts to a fee and rebate by narrowing by the amount of the fee and the rebate. The supply and demand curves in section VII.B.3.a are continuous, whereas in fact displayed liquidity has discrete price points, namely ticks (the focus of section VII.B.2). In the presence of ticks, access fees and rebates need no longer be neutral, namely the quoted spread may not adjust in the same seamless way to the presence of a rebate. The basic intuition of section VII.B.3.a states that a liquidity provider is indifferent from between receiving compensation from

¹⁰¹⁹ The term frictions here refers to factors that prevent prices from perfectly reflecting the forces of liquidity supply and demand. It does not imply that a frictionless market is the optimal market construct. As discussed throughout this release, a tick size that is too small creates pennywise concerns which can harm market quality outcomes. *See infra* section VII.D.1.b for additional discussion.

¹⁰²⁰ Harris Letter at 2–3, describing the equilibrium spreads model (citing Kalman J. Cohen, et al., *Transaction Costs, Order Placement Strategy and Existence of the Bid-Ask Spread*, 89 J. Pol. Econ. 287 (1981)).

¹⁰²¹ *See* Katya Malinova & Andreas Park, *Subsidizing Liquidity: The Impact of Make/Take Fees on Market Quality*, 70 J. Fin. 509 (2015).

¹⁰²² The authors also present evidence suggesting that adverse selection costs decreased with the introduction of the maker-taker model by increasing retail trader participation. *See* Malinova and Park (2015), *supra* note 1021. In the United States, most retail orders in NMS stocks are handled by wholesalers, who execute a large majority of the dollar volume of the retail orders they handle via internalization. *See, e.g.*, Lewis Letter attached to Virtu Letter II at p 8–12 and 40–45. Consequently, should there be a decrease in retail participation, we do not expect this to cause an increase in adverse selection on exchanges, because so much of retail order flow passes through a wholesaler before being executed.

the spread and compensation from the rebate. If a rebate is offered, the liquidity provider in a competitive market responds by accepting a lower spread. However, if the quoted spread is already at its floor, as specified by the tick, it is not possible to further lower the spread. In this case, unlike in section VII.B.3.a, the rebate and access fee are therefore not neutral. Rather, the floor creates rents that in this case accrue to those liquidity suppliers that are able to get to the front of the queue the fastest. These rents are earned at the expense of liquidity takers and slower liquidity providers.¹⁰²³

For stocks that are not constrained by the tick, rebates and access fees are again on average neutral, as we now show. Consider, for example, a stock with an economic spread of 2 cents. Absent a fee or rebate, the quoted spread would equal the economic spread rounded up to the next smallest tick, or this case, also 2 cents.¹⁰²⁴ Given a 30 mil rebate, a liquidity provider would be willing to quote a spread of 1.4 cents (the economic spread of 2 cents minus twice the 0.3 cents rebate, or 1.4 cents). However, given the tick, it is likely that the quoted spread would be a full 2 cents. If it were any lower, the profit-maximizing liquidity provider would incur a marginal cost (the economic spread of 2 cents) that exceeds the marginal benefit (*i.e.*, the next smaller quoted spread of 1 cent plus twice the 0.3 cent rebate, or 1.6 cents). It is unlikely that the liquidity provider would be willing to do this.¹⁰²⁵ Now, consider the perspective of the market participant taking liquidity. Because the liquidity taker is not typically on both sides of the trade, we use the half-spread to measure their costs due to the bid-ask spread.¹⁰²⁶ This liquidity taker pays the half-spread along with the access fee. In this case, the half-spread is 1 cent and the access fee is 0.3 cents, so the total is 1.3 cents. As stated above, in the absence of rebates, the quoted spread would equal its economic spread of 2 cents. The half-spread would be 1 cent, less than 1.3 cents, meaning that the liquidity taker pays more when there are fees and rebates.

However, consider a stock with an economic spread of 2.5 cents. Given a

¹⁰²³ *See* Budish Letter and Harris Letter; *see also supra* notes 999 to 1008, and surrounding discussion.

¹⁰²⁴ This stock may become tick-constrained in the future, and indeed some stocks that have an average spread of 2 cents over a prior period could be tick-constrained during that time.

¹⁰²⁵ Equivalently, the liquidity provider is only willing to quote at 1.4 cents or above, and therefore the quoted spread must be at least 2 cents.

¹⁰²⁶ *See* section VII.B.3.a.

30 mil rebate, a liquidity provider would be willing to quote a spread of 1.9 cents (the economic spread of 2.5 cents minus twice the 0.3 cents rebate, or 1.9 cents). Again, given the tick, it is likely that the quoted spread would be a full 2 cents. The liquidity taker would again pay 1.3 cents. In this case, in the absence of rebates, it is likely that the quoted spread would be 3 cents. Otherwise, the profit-maximizing liquidity provider would incur a marginal cost (the economic spread of 2.5 cents) that exceeds the marginal benefit (*i.e.*, the next smallest quoted spread of 2 cents). Given that the quoted spread is 3 cents, the quoted half-spread would be 1.5 cents, so the liquidity taker would likely pay more if there were no fees and rebates.

This same reasoning can be used to show that, except for stocks for which the economic spread is one cent or below, the effect of fees and rebates cancels out mathematically.¹⁰²⁷ The main intuition is that, while liquidity providers will quote one tick lower if the rebate pushes the spread below the next smaller tick, liquidity demanders pay the access fee even if the rebate does not change the quoted spread. We show that the gains to liquidity demanders from this situation are exactly offset by their losses when the rebate does not result in quoting one tick lower, all provided that the economic spread is greater than one cent. Thus, the supply-demand curve reasoning in section VII.B.3.a is robust to the introduction of the tick, provided that the economic spread is greater than 1 tick. In other words, for stocks for which the economic spread exceeds 1 tick, fees and rebates are neutral on average.

One commenter provides a numerical example that might appear to go against this neutrality result. In particular, the commenter states that, “because rebates

also increase depth, it is possible that the costs of access fees for liquidity takers are more than offset by the tighter spreads and depth that they create.”¹⁰²⁸ The numerical example is as follows: A liquidity taker wants to buy 1,000 shares, and the tick size is 1 cent. Without access fees and rebates, the liquidity provider is willing to sell 651 shares at a price of \$10.02 and 349 shares at a price of \$10.03, in which instance the liquidity provider earns \$10.02349 per share.¹⁰²⁹ The liquidity taker then pays an average of \$10.02349 per share to buy the 1,000 shares.¹⁰³⁰ In the presence of an access fee and rebate of 30 mils per share (*i.e.*, \$0.003 per share), the commenter states that the liquidity provider is willing to sell all 1,000 shares at \$10.02, in which instance the liquidity provider earns only \$10.023 per share (*i.e.*, \$10.02 per share + \$0.003 rebate per share = \$10.023 per share). The liquidity taker thus pays only \$10.023 per share to buy the 1,000 shares in the presence of an access fee and rebate of 30 mils (*i.e.*, \$10.02 per share + \$0.003 access fee per share = \$10.023 per share).

However, it is not clear from the example why the liquidity provider would be willing to offer all of the 1,000 shares at \$10.02 per share and earn only \$10.023 per share in the presence of the rebate when it earned \$10.02349 per share absent the rebate. Rather, in the presence of the rebate, the liquidity provider would be willing to sell 951 shares at \$10.02 and 49 shares at \$10.03, in which instance it would also earn \$10.02349 per share on average.¹⁰³¹ Depth does increase, as the commenter states. However, consistent with the neutrality argument, the liquidity taker pays exactly the same as without the fees and rebates. Thus, while tighter spreads offset the cost of access fees, they do not “more than offset” these fees.¹⁰³²

The previous argument for neutrality pertained to stocks for which the economic spread was greater than one tick. For stocks for which the economic spread is less than 1 tick, however, fees and rebates are not neutral. Rather, because the quoted spread cannot fall to compensate for the rebate, provision of liquidity is overpriced at the spread of one tick. Because the price is artificially high, the supply of liquidity is distorted,¹⁰³³ leading to rents for liquidity providers who can get to the top of the queue the fastest. It is harder as a result for slower liquidity providers, such as retail investors and institutions to have their limit orders executed. It is also more expensive for investors seeking to access liquidity. For these stocks, lowering the access fees lowers rents and improves market quality, making it cheaper to transact for investors as a whole.

C. Baseline

The baseline against which the costs, benefits, and the effects on efficiency, competition, and capital formation of the amendments are measured consists of the current state of the trading environment for NMS stocks, including pricing increments; current practice as it relates to order routing, quotes, fees, and rebates; and availability of data about quotes, fees, and rebates; and the current regulatory framework. The economic analysis appropriately considers existing regulatory requirements, including recently adopted rules, as part of its economic baseline against which the costs and benefits of the amendments are measured.¹⁰³⁴

¹⁰³³ Proposing Release, *supra* note 11, at 80328–29.

¹⁰³⁴ See, e.g., *Nasdaq v. SEC*, 34 F.4th 1105, 1111–15 (D.C. Cir. 2022). This approach also follows Commission staff guidance on economic analysis for rulemaking. See *Current Guidance on Economic Analysis in SEC Rulemaking*, (Mar. 16, 2012), available at https://www.sec.gov/divisions/riskfin/rsfi_guidance_econ_analy_secrulemaking.pdf (“The economic consequences of proposed rules (potential costs and benefits including effects on efficiency, competition, and capital formation) should be measured against a baseline, which is the best assessment of how the world would look in the absence of the proposed action.”); *id.* at 7 (“The baseline includes both the economic attributes of the relevant market and the existing regulatory structure.”). The best assessment of how the world would look in the absence of the proposed or final action typically does not include recently proposed actions, because that would improperly assume the adoption of those proposed actions.

¹⁰²⁷ Let S^* equal the economic spread, R the rebate, and the tick size. Then, for any integer $N \geq 1$, the liquidity provider collects $t - 2R$ more in profits under no rebates versus rebates when $S^* \in (tN, tN + 2R]$, and $2R$ less in profits when $S^* \in (tN + 2R, tN + t]$. These amounts sum to zero assuming a uniform distribution over the interval. The liquidity taker is on the other side of the trade; in total, the profits to providers are losses to takers, and so these also sum to zero. In contrast, for $N > 1$, the liquidity provider collects profits $2R$ over the interval $(0, t]$. The assumption of a uniform distribution over the interval is not necessary for the result. It is a reasonable and standard assumption given the lack of specific information on the properties S^* of over intervals of length equal to the tick size.

¹⁰²⁸ See Nasdaq Letter I at 23.

¹⁰²⁹ In the commenter’s example, prices account for the presence of a 1 cent tick. This explains why the liquidity provider is offering shares at \$10.02 and \$10.03 and not at prices in between. The liquidity provider earns: $(\$10.02 * 651 + \$10.03 * 349) / 1,000 = \$10.02349$ per share to sell 1,000 shares.

¹⁰³⁰ $(\$10.02 * 651 + \$10.03 * 349) / 1,000 = \$10.02349$ per share to buy 1,000 shares.

¹⁰³¹ $(951 * \$10.02 + 49 * \$10.03) / 1,000 + \$0.003 = \$10.02349$ per share, where \$0.003 is the rebate per share.

¹⁰³² See section VII.E.3 for discussion of the commenter’s concerns regarding capital formation as it relates to reduced depth at the NBBO.

Several commenters requested that the Commission consider interactions between the economic effects of the proposed rule and other recent Commission rules.¹⁰³⁵ Since the date of the Proposing Release, the Commission has adopted eight rules mentioned by commenters,¹⁰³⁶ namely the Settlement Cycle Adopting Release,¹⁰³⁷ the February 2024 Form PF Adopting Release,¹⁰³⁸ the May 2023 SEC Form PF

¹⁰³⁵ See, e.g., CCMR Letter; Independent Trustees Letter; SIFMA Letter I; Citadel Letter I; Equity Market Structure Citadel Letter; ICAN Letter; Virtu Letter II; AIC Letter; AIMA Letter; Antitrust Division of the DOJ Letter; Wagner Letter; Danny Mulson Letter. See also *supra* notes 135 to 137, and surrounding text, discussing these comments. Many commenters referred to the “Equity Market Structure Proposals” as a group, and we understand that commenters intended this to mean the four rulemaking proposals the Commission issued on Dec. 14, 2022. Of those four, only one was adopted prior to these amendments. One commenter described “Interconnected Rules” to include those four proposed rules issued on Dec. 14, 2023, as well as certain rules that were previously or later adopted, see *infra* notes 1036 to 1046; and a variety of other proposed rules including *Safeguarding Advisory Client Assets*, Investment Advisers Act of 1940 Release No. 6384 (Aug. 23, 2023), 88 FR 14,672 (Mar. 9, 2023). See AIC Letter at 1 n.3, 9 n.30 (listing rules and proposed rules, but not explaining a specific connection to the Proposing Release).

¹⁰³⁶ In addition, commenters also mentioned the proposal that was ultimately adopted as *Private Fund Advisers; Documentation of Registered Investment Adviser Compliance Reviews*, Advisers Act Release No. 6383 (Aug. 23, 2023), 88 FR 63206 (Sept. 14, 2023) (“Private Fund Advisers Adopting Release”). On June 5, 2024, the Fifth Circuit issued a ruling that vacated the rules and amendments adopted in the Private Fund Advisers Adopting Release. *Nat’l Ass’n of Priv. Fund Managers v. SEC*, 103 F.4th 1097 (2024).

¹⁰³⁷ *Shortening the Securities Transaction Settlement Cycle*, Securities Exchange Act Release No. 96930 (Feb. 15, 2023), 88 FR 13872 (Mar. 6, 2023) (“Settlement Cycle Adopting Release”). The rules and rule amendments adopted in the Settlement Cycle Adopting Release shorten the standard settlement cycle for most broker-dealer transactions from two business days after the trade date to one business day after the trade date. To facilitate an orderly transition to a shorter settlement cycle, a new rule also establishes requirements related to completing allocations, confirmations, and affirmations no later than the end of trade date for the processing of institutional transactions subject to the rule; requires registered investment advisers to make and keep records of each confirmation received, and of any allocation and each affirmation sent or received, with a date and time stamp for each allocation and affirmation indicating when it was sent or received; and requires clearing agencies that provide a central matching service to establish, implement, and enforce policies and procedures reasonably designed to facilitate straight-through processing and to file an annual report regarding progress with respect to straight-through processing. With certain exceptions, the rule has a compliance date of May 28, 2024. See Settlement Cycle Adopting Release, section VII.

¹⁰³⁸ *Form PF: Reporting Requirements for All Filers and Large Hedge Fund Advisers*, Advisers Act Release No. 6546 (Feb. 8, 2024), 89 FR 17984 (Mar. 12, 2024) (“February 2024 Form PF Adopting Release”). The Form PF amendments are designed to enhance the Financial Stability Oversight Council’s ability to monitor systemic risk as well as

Adopting Release,¹⁰³⁹ the Dealer Adopting Release,¹⁰⁴⁰ the Beneficial Ownership Adopting Release,¹⁰⁴¹ Rule 10c–1a Adopting Release,¹⁰⁴² the Short

bolster the SEC’s regulatory oversight of private fund advisers and investor protection efforts. The compliance date for the rule is Mar. 12, 2025. February 2024 Form PF Adopting Release, section II.F.

¹⁰³⁹ *Form PF; Event Reporting for Large Hedge Fund Advisers and Private Equity Fund Advisers; Requirements for Large Private Equity Fund Adviser Reporting*, Investment Company Act of 1940 Release No. 6297 (May 3, 2023), 88 FR 38146 (June 12, 2023) (“May 2023 SEC Form PF Adopting Release”). The Form PF amendments adopted in May 2023 require large hedge fund advisers and all private equity fund advisers to file reports upon the occurrence of certain reporting events. The compliance dates were Dec. 11, 2023, for the event reports in Form PF sections 5 and 6, and June 11, 2024, for the remainder of the Form PF amendments in the May 2023 SEC Form PF Adopting Release. See May 2023 SEC Form PF Adopting Release, section II.E.

¹⁰⁴⁰ *Further Definition of “As a Part of a Regular Business” in the Definition of Dealer and Government Securities Dealer in Connection with Certain Liquidity Providers*, Securities Exchange Act Release No. 34–99477 (Feb. 6, 2024), 89 FR 14938 (Feb. 29, 2024) (“Dealer Adopting Release”). New Rules 3a5–4 and 3a44–2 further define the phrase “as a part of a regular business” as used in the statutory definitions of “dealer” and “government securities dealer.” The compliance date is Apr. 29, 2025, for persons engaging in activities that meet the qualitative factors under the final rules. See Dealer Definition Adopting Release, section II.B.

¹⁰⁴¹ *Modernization of Beneficial Ownership Reporting*, Securities Act of 1933 Release No. 11253 (Oct. 10, 2023), 88 FR 76896 (Nov. 7, 2023) (“Beneficial Ownership Adopting Release”). Among other things, the amendments generally shorten the filing deadlines for initial and amended beneficial ownership reports filed on Schedules 13D and 13G, and require that Schedule 13D and 13G filings be made using a structured, machine-readable data language. The amendments are effective Feb. 5, 2024. The new filing deadline for Schedule 13G will not be required before Sept. 30, 2024, and the rule’s structured data requirements will not be required until Dec. 18, 2024. Beneficial Ownership Adopting Release, section II.G.

¹⁰⁴² *Reporting of Securities Loans*, Securities Exchange Act Release No. 98737 (Oct. 13, 2023), 88 FR 75644 (Nov. 3, 2023) (“Rule 10c–1a Adopting Release”). This rule requires any covered person who agrees to a covered securities loan on behalf of itself or another person to report specified information about the covered securities loan to a registered national securities association (currently FINRA is the only registered national securities association)—or rely on a reporting agent to do so—and requires the registered national securities association to make certain information it receives available to the public. Covered persons will include market intermediaries, securities lenders, and broker-dealers, while reporting agents include certain brokers, dealers, or registered clearing agencies. The rule’s compliance dates require that the registered national securities association propose rules pursuant to Rule 10c–1a(f) by May 2, 2024, and the proposed rules shall be effective no later than Jan. 2, 2025; that covered persons report Rule 10c–1a information to a registered national securities association on or by Jan. 2, 2026 (which requires that the registered national securities association have implemented data retention and availability requirements for reporting); and that the registered national securities association publicly report Rule 10c–1a information by Apr. 2, 2026. Rule 10c–1a Adopting Release, section VIII.

Position Reporting Adopting Release,¹⁰⁴³ and the Rule 605 Amendments.¹⁰⁴⁴ The Commission has also considered the potential effects on entities that are implementing other recently adopted rules during the compliance period for these amendments, including the Treasury Clearing Adopting Release¹⁰⁴⁵ and the

¹⁰⁴³ *Short Position and Short Activity Reporting by Institutional Investment Managers*, Securities Exchange Act Release No. 98738 (Oct. 13, 2023), 88 FR 75100 (Nov. 1, 2023) (“Short Position Reporting Adopting Release”). Under the new rule, institutional investment managers that meet or exceed certain specified reporting thresholds are required to report, on a monthly basis using the related form, specified short position data and short activity data for equity securities. The compliance date is Jan. 2, 2025. See Short Position Reporting Adopting Release, section VI. In addition, the Commission adopted an amendment to the national market system (“NMS”) plan governing the consolidated audit trail (“CAT”) created pursuant to the Exchange Act to require the reporting of reliance on the bona fide market making exception in the Commission’s short sale rules. The Commission published the text of the amendment to the NMS plan governing the CAT (“CAT NMS Plan”) in a separate notice. The compliance date for the amendment to the CAT NMS Plan is July 1, 2025. See SEC, *Notice of the Text of the Amendment to the National Market System Plan Governing the Consolidated Audit Trail for Purposes of Short Sale-Related Data Collection*, Securities Exchange Act Release No. 98739 (Oct. 13, 2023), 88 FR 75079 (Nov. 1, 2023).

¹⁰⁴⁴ Rule 605 Amendments, *supra* note 10. The Commission adopted amendments to rules requiring disclosures for order executions in NMS stocks, including expanding the scope of reporting entities, modifying the scope of orders covered by the rule, and modifying the information required to be reported under the rule. The rule has an effective date of June 14, 2024, and, with a few exceptions, a compliance date of Dec. 14, 2025. See Rule 605 Amendments, section VII.

¹⁰⁴⁵ *Standards for Covered Clearing Agencies for U.S. Treasury Securities and Application of the Broker-Dealer Customer Protection Rule with Respect to U.S. Treasury Securities*, Securities Exchange Act Release No. 99149 (Dec. 13, 2023), 89 FR 2714 (Jan. 16, 2024) (“Treasury Clearing Adopting Release”). Among other things, the amendments require covered clearing agencies for U.S. Treasury securities to have written policies and procedures reasonably designed to require that every direct participant of the covered clearing agency submit for clearance and settlement all eligible secondary market transactions in U.S. Treasury securities to which it is a counterparty. The compliance date was Mar. 18, 2024, for covered clearing agencies to file any proposed rule changes pursuant to Rules 17Ad–22(e)(6)(i), 17Ad–22(e)(18)(iv)(C), and 15c3–3, which must be effective by Mar. 31, 2025. With respect to the changes to Rule 17Ad–22(e)(18)(iv)(A) and (B), (i) covered clearing agencies were required to file any proposed rule changes regarding those amendments no later than June 14, 2024, and (ii) those changes must be effective by Dec. 31, 2025, for cash market transactions encompassed by section (ii) of the definition of an eligible secondary market transaction, and by June 30, 2026, for repo transactions encompassed by section (i) of the definition of eligible secondary market transactions. Finally, the Commission amended the broker-dealer customer protection rule to permit margin required and on deposit with covered clearing agencies for U.S. Treasury securities to be included as a debit in the reserve formulas for accounts of customers

Continued

Customer Notification Adopting Release.¹⁰⁴⁶ These recently adopted rules were not included as part of the baseline in the Proposing Release because they were not yet adopted at that time, but they are part of the baseline in this analysis.¹⁰⁴⁷ In response to commenters, this economic analysis considers potential economic effects arising from any overlap in compliance dates between these amendments and the other recent amendments.¹⁰⁴⁸ It also considers interactions between these amendments and the Rule 605 Amendments.¹⁰⁴⁹

1. Tick Sizes

Preexisting Rule 612 of Regulation NMS restricts the ability of venues to

and proprietary accounts of broker-dealers, subject to certain conditions. Compliance by the direct participants of a U.S. Treasury securities covered clearing agency with the requirement to clear eligible secondary market transactions is not required until Dec. 31, 2025, and June 30, 2026, respectively, for cash and repo transactions. See Treasury Clearing Adopting Release, section III.

¹⁰⁴⁶ Regulation S-P: Privacy of Consumer Financial Information and Safeguarding Customer Information, Securities Exchange Act Release No. 100155 (May 15, 2024), 89 FR 47688 (June 3, 2024) (“Customer Notification Adopting Release”). The Commission amended Regulation S-P to require brokers, dealers, investment companies, registered investment advisers, and transfer agents registered with the Commission or another appropriate regulatory agency to adopt written policies and procedures for incident response programs to address unauthorized access to or use of customer information. These must include procedures for providing timely notification to individuals affected by an incident involving sensitive customer information with details about the incident and information designed to help affected individuals respond appropriately. Among other things, the amendments also broadened the scope of information covered by the safeguards rule and the disposal rule, and extended the requirements to safeguard customer records and information to all transfer agents. The compliance date for larger entities is Dec. 3, 2025, and for smaller entities, June 3, 2026. Customer Notification Adopting Release, section II.F.

¹⁰⁴⁷ Some commenters assumed that the four proposed rules issued on Dec. 14, 2022, would be implemented simultaneously, and therefore stated that the baseline in the Proposing Release was inaccurate to the extent it did not contemplate that the other rules have gone into effect. See, e.g., Equity Market Structure Citadel Letter at 15. As discussed above, however, our baseline does not assume the adoption of proposed rules. Instead, the baseline changes incrementally with each adopted rule. To the extent those or other proposals are adopted in the future, the baseline in those subsequent rulemakings will reflect the existing regulatory requirements at that time.

¹⁰⁴⁸ See *infra* section VII.D.6.b.

¹⁰⁴⁹ See, e.g., SIFMA Letter II (stating that variable tick sizes could diminish the ability to compare execution quality using the Rule 605 disclosures); Citadel Letter II (stating execution quality statistics are important to understanding the effects of these amendments on market quality); AIMA Letter (suggesting finalization of the proposed Rule 605 amendments would, along with the MDI round lot order definition, provide a much more informed economic baseline against which to assess other equity market structure proposals); see also *infra* section VII.D.6.a, discussing this topic.

display, rank, or accept quotations in NMS stocks beyond a certain minimum quoting increment (or tick). This section discusses current regulation on tick sizes and Commission analysis showing that the current tick size acts as a binding price floor on the quoted spread a significant portion of the time for a large fraction of the share volume transacted in NMS stocks.

a. Current Regulations

Preexisting Rule 612 of Regulation NMS, which came into effect on August 29, 2005, prohibited a national securities exchange, national securities association, ATS, vendor, or broker or dealer from displaying, ranking, or accepting quotations, orders, or indications of interest in any NMS stock priced in an increment smaller than \$0.01 if the quotation, order, or indication of interest is priced equal to or greater than \$1.00 per share. If the quotation, order, or indication of interest is priced less than \$1.00 per share, the minimum pricing increment is \$0.0001. Most listing exchanges require stocks listed on their exchanges to maintain a price greater than \$1.00 per share, and consequently \$0.01 is the prevailing tick size for most quotes and orders for NMS stocks.¹⁰⁵⁰ Preexisting Rule 612 of Regulation NMS effectively establishes \$0.01 as the minimum spread that can be quoted for stocks priced equal to, or greater than, \$1.00 per share because the NBBO is determined by the best displayed round lot quotes, and exchanges are required to have rules in place to avoid and reconcile locked and crossed quotations.¹⁰⁵¹

While preexisting Rule 612 of Regulation NMS restricts quoting or submitting orders in sub-penny increments for NMS stocks priced greater than or equal to \$1.00, it does not restrict trading in sub-penny increments. Sub-penny trading on exchanges and ATSs occurs primarily as a result of midpoint orders and benchmark trades. Benchmark trades, such as volume weighted average price (“VWAP”) and time weighted average price (“TWAP”) orders, may not be explicitly priced in an impermissible sub-penny increment, but the ultimately determined execution price may be in a sub-penny increment. Trading at sub-

penny increments also occurs as a result of broker-dealers, including some OTC market makers known as wholesalers, internalizing customer order flow at sub-penny prices.¹⁰⁵²

Sub-penny trading on registered exchanges may also occur as a result of their RLPs. The Commission granted exemptions from Rule 612 to various national securities exchanges’ RLPs as a means to allow them to compete with OTC sub-penny price improvement.¹⁰⁵³ Under the RLPs, exchanges can accept and rank certain quotes and orders from certain participants in sub-penny increments as small as \$0.001.¹⁰⁵⁴ The national securities exchanges designed the RLPs to attract retail orders by providing a potential for price improvement at sub-penny levels because “most marketable retail order flow is executed in the OTC markets, pursuant to bilateral agreements, without ever reaching a public exchange” and OTC market makers typically pay retail brokers for their order flow.¹⁰⁵⁵ Quotes in RLP programs are not displayed. Instead, the appropriate SIP disseminates a flag indicating the side of the market for which an exchange has an RLP quote available at a price better than the NBBO. Because the exclusive SIP does not make known the price or the size of the RLP quote, market participants do not see the full liquidity available in RLP programs.¹⁰⁵⁶ To date, RLPs have not attracted a significant volume of retail order flow.¹⁰⁵⁷

¹⁰⁵² The term “wholesaler” is not defined in Regulation NMS, but commonly refers to a broker-dealer acting as an OTC market maker that primarily focuses on attracting orders from broker-dealers that service the accounts of a large number of individual investors, referred to in this release as “retail brokers.”

¹⁰⁵³ See Securities Exchange Act Release No. 67347 (July 3, 2012), 77 FR 40673 (July 10, 2012) (approving retail liquidity programs on a pilot basis for NYSE and NYSE Amex and granting rule 612 exemption) (“NYSE Retail Liquidity Program Approval Order”); see also CBOE BYX Rule 11.24; Securities Exchange Act Release No. 68303 (Nov. 27, 2012), 77 FR 71652 (Dec. 3, 2012) (CBOE BYX Retail Pilot Program Approval Order); and Nasdaq BX Equity Rule 4780; Exchange Act Release No. 73702 (Nov. 28, 2014), 79 FR 72049 (Dec. 4, 2014) (NASDAQ BX Retail Pilot Program Approval Order).

¹⁰⁵⁴ See discussion in *supra* section III.C.1.

¹⁰⁵⁵ See specifically, NYSE Retail Liquidity Program Approval Order, *supra* note 1053, at 40679. The Commission stated that “[i]nternalizing broker-dealer[s] can offer sub-penny executions, provided that such executions do not result from impermissible sub-penny orders or quotations” by “typically select[ing] a sub-penny price for a trade without quoting at that exact amount or accepting orders from retail customers seeking that exact price.”

¹⁰⁵⁶ See, e.g., UTP Participant Input Specification (April 2024), available at https://www.utpplan.com/DOC/UtpBinaryInputSpec_Fractional.pdf.

¹⁰⁵⁷ See Proposing Release, *supra* note 11, at 80272 n.70 (citing to industry and academic

¹⁰⁵⁰ See, e.g., NYSE Continued Listing Standards, § 802.01C, available at <https://www.nyse.com/listings/resources>; Rulebook—The Nasdaq Stock Market, § 5400, available at <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules>.

¹⁰⁵¹ See Reg NMS Rule 610(d). A locked market occurs when the bid and ask price for a security are identical. A crossed market occurs when the bid is higher than the ask.

One commenter stated the ability to trade in increments of smaller than a penny in certain circumstances as means of suggesting that there may be no need for rulemaking.¹⁰⁵⁸ However, it is not possible to post a displayed quote at an increment other than a penny. The economic forces that govern the tradeoffs in determining the tick size depend on the quote being displayed, ranked, and accepted. The empirical analysis also pertains to displayed quotes.

b. Analysis of Quoted Spreads Under Current Ticks

This section discusses empirical analysis by the Commission on the prevalence of trading at different quoted

spread ranges, defined in the Proposing Release using the concept of TWAQS.¹⁰⁵⁹ To document the prevalence of trading at different quoted spread ranges, table 3 presents data on trading volume in 2023 based on average time weighted quoted spreads throughout the entire year for NMS stocks with a quotation, order, or indication of interest priced equal to or greater than \$1.00 per share.¹⁰⁶⁰ The analysis breaks trading volume each day into one of 17 average quoted spread bins, beginning with stocks that have TWAQS less than or equal to \$0.011.¹⁰⁶¹ Table 3 also reports the daily average number of stocks in each bin.

The data analysis in table 3 indicates that under the current tick size regime

in 2023, 65.2% of share trading volume (31.5% of dollar volume) occurred in stocks in the first average quoted spread bin of \$0.011 or less. Table 3 also reports that an additional 9.1% of share volume (15.3% of dollar volume) occurred in stocks with quoted spreads between \$0.011 and \$0.015. In sum, in table 3, in 2023, approximately 74.3% of share volume (46.8% of dollar volume) transacted in NMS stocks (specifically, NMS stocks with a quotation, order, or indication of interest priced equal to or greater than \$1.00 per share) which have a quoted spread that is likely to be constrained by the minimum pricing increment,¹⁰⁶² which as discussed both above (section VII.B.2) and below (VII.D.1) increases transaction costs.

TABLE 3—SHARE VOLUME BY QUOTED SPREAD 2023^a

Quoted spread	Share volume (%)	Dollar volume (%)	Average # stocks
Quoted Spread ≤ \$0.011	65.2	31.5	1,782
\$0.011 < Quoted Spread ≤ \$0.015	9.1	15.3	638
\$0.015 < Quoted Spread ≤ \$0.02	4.2	5.2	560
\$0.02 < Quoted Spread ≤ \$0.03	5.7	8.4	1,036
\$0.03 < Quoted Spread ≤ \$0.04	3.6	7.6	811
\$0.04 < Quoted Spread ≤ \$0.05	2.1	3.6	673
\$0.05 < Quoted Spread ≤ \$0.06	1.5	2.3	582
\$0.06 < Quoted Spread ≤ \$0.07	1.2	2.1	522
\$0.07 < Quoted Spread ≤ \$0.08	1.0	1.8	445
\$0.08 < Quoted Spread ≤ \$0.09	0.8	1.6	377
\$0.09 < Quoted Spread ≤ \$0.10	0.7	1.6	317
\$0.10 < Quoted Spread ≤ \$0.11	0.6	1.5	271
\$0.11 < Quoted Spread ≤ \$0.12	0.5	1.3	222
\$0.12 < Quoted Spread ≤ \$0.13	0.4	1.1	187
\$0.13 < Quoted Spread ≤ \$0.14	0.3	1.1	163
\$0.14 < Quoted Spread ≤ \$0.15	0.3	1.0	144
\$0.15 < Quoted Spread	2.8	13.0	2,177

^a This table provides share volume by stocks with different quoted spread profiles. To create this table, for each day the universe of stocks (identified by a unique stock variable) covered in the WRDS Intra-Day Indicators data are assigned into one of the 17 quoted spread bins based on that day's time weighted quoted spread as computed by WRDS Intra-Day Indicators. Then all share and dollar trading volume across all trading days in 2023 is aggregated for each of the 17 quoted spread bins. Percentages based on these totals are then computed. This table also presents the daily average number of stocks in each bin. To compute this variable, for each trading day in 2023, the number of stocks in each bin is tabulated, then the average across all trading days is presented here. Certain items in this table 3 may also be affected by the MDI Rules once they are fully implemented. See *infra* section VII.C.3.

c. Reverse Stock Splits

A reverse split exchanges a fixed number of existing shares for a smaller

number of new shares. The new shares have a higher price, but there are fewer of them.¹⁰⁶³ For example, if an issuer

undergoes an 8-for-1 reverse split, eight shares are exchanged for one share that is worth the same as the eight,

discussions on why RLPs may not attract significant retail order flow).

¹⁰⁵⁸ See Lewis Letter at 33–34, attached to Virtu letter II.

¹⁰⁵⁹ See Proposing Release, *supra* note 11, table 4.

¹⁰⁶⁰ The data derived in table 3 was derived using the same methodology as corresponding table 4 in the Proposing Release (PR table 4). See Proposing Release, *supra* note 11, at 80308. The only differences between the tables are that table 3 uses data for all trading days in 2023 (instead of from Jan. to May 2022 in PR table 4), and table 3, because of our policy choice to set the minimum tick size at 0.5c (for quotes and orders priced \$1.00 or more for NMS stocks that have a TWAQS of \$0.015 or less), adds tick size bins for quoted spreads from 1.1c to 1.5c and 1.5c to 2c.

¹⁰⁶¹ Because of the \$0.01 minimum quoting increment for NMS stocks priced equal to or greater than \$1.00 per share, a stock cannot have a quoted spread less than \$0.01 unless markets become locked or crossed. The existence of locked and crossed markets can in some cases result in time weighted quoted spread that are very slightly lower than \$0.01. However, even for stocks with spreads most constrained by the tick, even a fraction of a second spent with a higher spread would likely result in an average quoted spread higher than \$0.01. For example, a large trade can exhaust liquidity deeper in the limit order book such that the stock's quoted spread temporarily increases from \$0.01. Thus, time weighed quoted spreads will virtually always be greater than \$0.01. This makes \$0.011 a more pragmatic minimum cutoff for empirical analysis than \$0.01.

¹⁰⁶² For the share volume, 74.3% = 65.2% (*i.e.*, Quoted Spread ≤ \$0.011) + 9.1% (*i.e.*, \$0.015

< Quoted Spread ≤ \$0.02). For the dollar volume, 46.8% = 31.5% (*i.e.*, Quoted Spread ≤ \$0.011) + 15.3% (*i.e.*, \$0.015 < Quoted Spread ≤ \$0.02). See *supra* section VII.B.2 for a definition of tick-constrained; see also Proposing Release, *supra* note 11, table 4, which used the same methodology and estimated that, in the first six months of 2022, 56% of share volume transacted in NMS stocks with a quoted spread of < \$0.011, while an additional 15% of share volume traded in stocks with a quoted spread of \$0.011 < and ≤ \$0.02.

¹⁰⁶³ See, e.g., General Electric, GE Reverse Stock Split Frequently Asked Questions as of September 21, 2021, at 1, available at https://www.ge.com/sites/default/files/GE_Reverse_Stock_Split_FAQs.pdf (last accessed July 27, 2024). See also FINRA, Stock Splits, available at <https://www.finra.org/investors/investing/investment-products/stocks/stock-splits>.

increasing the price by a factor of eight. All else equal, one would expect the quoted spread, which represents the per-share trading costs to also rise by a factor of eight. Thus, the cost of transacting in the stock, for a given dollar exposure, would remain constant. However, if a stock were tick constrained, undergoing a reverse split would cause the tick to become smaller relative to the (higher) stock price, thereby alleviating the tick constraint and reducing transaction costs.¹⁰⁶⁴

Using this logic, one commenter pointed out that currently the problem that the Commission identifies with regard to tick constrained stocks could be solved without Commission action by issuers making the decision to undergo a reverse stock split.¹⁰⁶⁵ The commenter further states, “[t]he fact that issuers do not discuss this indicates the issue is immaterial to them.”¹⁰⁶⁶ While the Commission agrees that a reverse split alleviates the tick constraint, there may be reasons that an issuer may choose not to undergo a reverse split apart from an assessment of the immateriality of tick constraints. Reverse splits have historically been associated with negative stock returns.¹⁰⁶⁷ Research suggests that this may be because the market views stock splits as a signal,¹⁰⁶⁸ and issuers may

not wish to give the appearance of bad news with a reverse split. Reverse splits also change the share price, which may affect the trading characteristics of the stock.¹⁰⁶⁹ In addition, the direct administrative costs of a stock split for a large issuer are estimated to be between \$250,000 and \$800,000 (as of 2009).¹⁰⁷⁰ Finally, an issuer may not capture all of the benefits of the liquidity arising from the reverse split and the alleviated constraints. In sum, though reverse stock splits may address tick constraints, they are an inefficient solution for tick constrained securities. One commenter agreed, stating that “while issuers can make pricing in their securities more or less granular through reverse or forward splits, it’s not practical for the SEC and the industry to rely on them to do so.”¹⁰⁷¹

2. Access Fees

This section discusses current regulation on the access fee cap, the current practices at exchanges for setting access fees and rebates, and Commission analysis showing that most exchanges assess access fees close to the current access fee cap and use these access fees to principally fund rebates.

a. Current Regulations

Preexisting Rule 610(c) limits the fees that trading centers can charge for accessing protected quotations with prices of \$1.00 per share or greater to \$0.0030 per share (or 30 cents per 100 shares). This level is commonly referred to as 30 mils.¹⁰⁷² Preexisting Rule 610 also prohibits access fees in excess of 0.3% of the price for stocks priced less than \$1.00 per share. The 30 mil fee cap was adopted as a part of Regulation NMS in conjunction with the order protection rule and was implemented to

makes the measurement of the market reaction to the announcement of a reverse split imprecise. Once the reverse split is completed, however, the academic literature documents negative returns—see *id.*

¹⁰⁶⁹ See, e.g., Kelly Shue & Robert Townsend, *Can the Market Multiply and Divide? Non-Proportional Thinking in Financial Markets*, 76 J. Fin. 5 (Oct. 2021). This paper documents greater return responses to news in lower-priced stocks and hypothesizes that some investors think about stock price changes in terms of dollars rather than returns. The paper studies reverse stock splits and finds evidence consistent with this hypothesis.

¹⁰⁷⁰ See Weld et al., *The Nominal Share Price Puzzle*, 23 J. Econ. Perspectives 2 (Spring 2009). The authors estimate the administrative costs of stock splits. Reverse stock splits are likely to have similar administrative costs. After adjusting for changes in the consumer price index from 2009 to 2024, the paper’s estimated direct administrative cost of a split for a large issuer in 2024 is \$365,000 to \$1,170,000.

¹⁰⁷¹ See *The Tick Size Debate Revisited* attached to MEMX Letter at 69.

¹⁰⁷² See *Proposing Release*, *supra* note 11, at 80309.

prevent trading centers from charging excessive fees to orders that were required to trade with a protected quote.¹⁰⁷³ The 30 mil fee cap was also set based on existing market practices at the time.¹⁰⁷⁴ Rule 610(c) only regulates fees to access protected quotes; it does not regulate fees to access non-protected quotes, nor does it regulate rebates that exchanges can offer. However, the 30 mil fee cap has become a central component of the structure of fees and rebates as access fees for non-protected quotes generally do not exceed the 30 mil fee cap, nor do typical rebates.¹⁰⁷⁵

b. Current Practices at Exchanges

The transaction fee structure on an exchange currently takes one of three forms. The most common is maker-taker, in which liquidity demanders (*i.e.*, takers) are assessed the access fee and liquidity providers (*i.e.*, makers) are offered a rebate. Exchanges can also be inverted (also known as taker-maker), in which liquidity demanders are offered a rebate and liquidity providers are assessed an access fee.¹⁰⁷⁶ The last form of fee structure is flat; a flat exchange either charges one or both sides a fee but does not offer rebates. While the exchanges are free to subsidize rebates beyond what they earn through collecting access fees, in practice this does not appear to happen.¹⁰⁷⁷ The difference between the average access fee charged and the average rebate paid

¹⁰⁷³ See Regulation NMS Adopting Release, *supra* note 4, at 37545 (justifying the 30 mil limit: “For quotations to be fair and useful, there must be some limit on the extent to which the true price for those who access quotations can vary from the displayed price To protect limit orders, orders must be routed to those markets displaying the best-priced quotations. This purpose would be thwarted if market participants were allowed to charge exorbitant fees that distort quoted prices”); see also *supra* note 434 and surrounding discussion from the Regulation NMS Adopting Release on the potential—absent a fee cap—for high fee markets to take advantage of intermarket price protections.

¹⁰⁷⁴ See *id.* at 37503 (the 30 mil access fee cap was chosen because “it will not seriously interfere with current business practices” and “[i]n the absence of a fee limitation, some ‘outlier’ trading centers might take advantage of the requirement to protect displayed quotations by charging exorbitant fees to those required to access the outlier’s quotations”); see also *supra* note 357.

¹⁰⁷⁵ See *infra* table 4 for a summary of transaction-based fee schedules for U.S. national equities exchanges as of Feb. 2024.

¹⁰⁷⁶ While Rule 611 creates incentives for exchanges to use high fees and rebates in order to quote at the NBBO—see *infra* note 1120—not all exchanges compete on this margin (*e.g.*, inverted exchanges).

¹⁰⁷⁷ See *infra* section VII.D.2 for more discussion on why exchanges may not subsidize rebates from other sources of revenue; see also Eric Budish, et al., *A Theory of Stock Exchange Competition and Innovation: Will the Market Fix the Market?* (working paper May 22, 2019) available at <https://ssrn.com/abstract=3391008> (retrieved from SSRN Elsevier database).

¹⁰⁶⁴ For example, suppose a stock trades at \$10 per share and is tick-constrained such that it trades with a quoted spread of \$0.01, but could sustain a quoted spread of \$0.004 if not for the penny tick. If the stock undergoes a 5-for-1 reverse split, then the share price would rise to \$50 (5*\$10) and the quoted spread would rise to \$0.02 (5*\$0.004). The reverse split thereby alleviates the tick constraint. The reverse split also reduces trading costs in this case. To see the reduction in costs, suppose an investor wants to submit a market order for \$100 worth of the stock. With a \$10 price and a \$0.005 half-spread, this would entail purchasing five shares and paying a transaction cost of \$0.025 (*i.e.*, five times the half-spread of \$0.005). With a \$50 price and a \$0.01 half-spread, however, the market order would only entail purchasing two shares and paying a transaction cost of \$0.02 (*i.e.*, two times the half-spread of \$0.01), thus reducing transaction costs by 25%. See *infra* note 1295 and surrounding discussion for empirical studies documenting a reduction in trading costs when tick-constrained stocks complete a reverse split.

¹⁰⁶⁵ See *Virtu Letter II* at 25.

¹⁰⁶⁶ *Id.* at 25.

¹⁰⁶⁷ See, e.g., Hemang Desai & Prem C. Jain, *Long-Run Common Stock Returns Following Stock Splits and Reverse Splits*, 70 J. Business 3 (July 1997); Kim et al., *Return Performance Surrounding Reverse Stock Splits: Can Investors Profit?*, 37 Fin. Mgmt. 2 (Summer 2008).

¹⁰⁶⁸ For a discussion on the signal conveyed by stock splits, see, e.g., Maureen McNichols & Ajay Dravid, *Stock Dividends, Stock Splits, and Signaling*, 45 J. Fin. 3 (July 1990); David L. Ikenberry et al., *What Do Stock Splits Really Signal?*, 31 J. Fin. & Quantitative Analysis 3 (Sept. 1996). The academic literature on signaling generally uses stock splits (rather than reverse splits) because standard databases do not include the announcement date of reverse splits, which

is the net capture earned by the exchanges for facilitating a transaction.¹⁰⁷⁸

The regulatory access fee cap is most relevant for maker-taker markets where the trader accessing a protected quote must pay the access fee. This is because the access fee cap applies only to fees for accessing protected quotations and does not apply to fees for posting quotations. On an inverted venue, the exchange is not restricted by preexisting Rule 610 in terms of the rebate that it can offer to access a protected quote or the fee to post a protected quote.¹⁰⁷⁹ Flat rate venues, which do not offer rebates, do not appear to be economically constrained by the preexisting Rule 610(c) as their fees for both taking and adding liquidity are significantly lower than the 30 mil fee cap.¹⁰⁸⁰

Fee/rebate schedules can be quite complex, and the fee schedules change frequently.¹⁰⁸¹ As was discussed in the Proposing Release,¹⁰⁸² the actual fee or rebate that an exchange member is assessed on most exchanges also generally depends on which tier a market participant falls into based on trading volume in that month, with higher-volume market participants typically receiving a higher rebate or a lower fee.¹⁰⁸³ Exchanges file their fee and rebate schedules with the Commission and post them on their

websites. While this means that the rebate and fee rates associated with each volume-based tier can be known at the time a market participant trades, market participants may not know which volume-based tier they will fall under at the time of the trade (and thus the fee or rebate rate that will apply to their particular trade) because the tier they will fall under is typically determined based on their trading volume during the current month, which is not finalized until the end of the month.¹⁰⁸⁴ More specifically, the volume-based fees or rebates a market participant receives from an exchange are often determined by a market participant's average total daily traded share volume on the exchange during the month as a percentage of either the average total daily market volume reported by one of the consolidated tapes during the month or as a percentage of the average total daily market volume reported by all consolidated tapes during the month.¹⁰⁸⁵ It is therefore, as one commenter stated, difficult for market participants to forecast trading costs.¹⁰⁸⁶

¹⁰⁸⁴ See Chester Spatt, *Is Equity Market Exchange Structure Anti-Competitive?* (Dec. 28, 2020), available at <https://www.cmu.edu/tepper/faculty-and-research/assets/docs/anti-competitive-rebates.pdf>. However, not all exchanges offer volume-based tiers in their fee structures. For example, LTSE does not charge fees to transact. For exchanges like these, it is possible to determine with certainty the cost to transact prior to executing a trade.

¹⁰⁸⁵ The Equity Data Plans disseminate SIP data over three separate networks: (1) Tape A for securities listed on the New York Stock Exchange ("NYSE"); (2) Tape B for securities listed on exchanges other than NYSE and Nasdaq; and (3) Tape C for securities listed on Nasdaq. These tapes are referred to as the "consolidated tapes." The CTA Plan governs the collection, consolidation, processing, and dissemination of last sale information for Tape A and Tape B securities. The CQ Plan governs the collection, consolidation, processing, and dissemination of quotation information for Tape A and Tape B securities. Finally, the UTP Plan governs the collection, consolidation, processing, and dissemination of last sale and quotation information for Tape C securities. For details on exchange volume-based fees and rebates, see, e.g., *Add and Remove Rates*, Nasdaq, available at <http://www.nasdaqtrader.com/Trader.aspx?id=PriceListTrading2>; *New York Stock Exchange Price List 2024*, NYSE, available at https://www.nyse.com/publicdocs/nyse/markets/nyse/NYSE_Price_List.pdf; and *Choe U.S. Equities Fee Schedules EDGX Equities*, Choe, available at <https://www.choe.com/us/equities/membership/fee-schedule/edgx/>. See also the Fee Tiers Proposal *supra* note 437 at 76284–88, describing Commission concerns about the effect of tiers on competition among exchange members, conflicts of interest between members and their customers, and competition between exchanges.

¹⁰⁸⁶ See Council of Institutional Investors Letter at 4 (stating "It is our understanding that currently exchanges use volume-based tier schedules that depend on the current month's trading volume. As a result, the per-transaction fee or rebate cannot be known when the trade occurs. This significantly impedes the ability of institutional investors and other market participants to evaluate the total price

Hence, market participants currently typically have to make trading decisions without the ability to determine their full trading costs.

Broker-dealers trading in an agency capacity may pass fees and rebates received from exchanges while working a customer's order through to the customer, either directly or through a change in the commission charged for the order. One commenter stated that passing through transaction fees and rebates is not common.¹⁰⁸⁷ The Commission is uncertain the extent to which transaction fees and rebates are passed through to customers, or in what form. It is possible that fees and rebates are passed through indirectly in the form of payment for order flow or in price improvement. For example, one broker-dealer's 606 reports, in discussing orders routed to a wholesaler, acknowledged that exchange rebates may affect the wholesaler's subsequent routing decision, but that those rebates could be used to provide price improvement to the broker-dealer's customers or order flow payments to the broker-dealer.¹⁰⁸⁸ As discussed in the Proposing Release, the Commission is uncertain of how much demand currently exists for rebates to be passed through to end customers.¹⁰⁸⁹

Market participants who are not themselves broker-dealers may access information on exchange fees and rebates through reports available under Rule 606. With respect to held orders, Rule 606(a)(1) requires broker-dealers to produce quarterly public reports regarding their routing of non-directed orders¹⁰⁹⁰ in NMS stocks that are submitted on a held basis. Along with other information, these reports require the broker-dealer to report both the total dollar amount and per share average of net transaction fees paid and net transaction rebates received for different

of a trade at the time of execution and . . . [the] ability to evaluate best execution and order routing.'").

¹⁰⁸⁷ See Harris Letter at 12 ("Almost all retail and many institutional brokers pay the taker fee and keep the maker rebate when trading on behalf of their clients.").

¹⁰⁸⁸ See *E*Trade.com*, Morgan Stanley Smith Barney LLC—Held NMS Stocks and Options Order Routing Public Report, 1st Quarter, 2024, at 2, available at https://cdn2.etrade.net/1/24043013500.0/aempros/content/dam/etrade/retail/en_US/documents/pdf/order-routing-reports/2024/606-MSWM-2024Q1.pdf.

¹⁰⁸⁹ See Proposing Release, *supra* note 11, at 80330.

¹⁰⁹⁰ A "non-directed order" means any order from a customer other than a directed order. See 17 CFR 242.600(b)(56). A "directed order" means an order from a customer that the customer specifically instructed the broker or dealer to route to a particular venue for execution. See 17 CFR 242.600(b)(27).

¹⁰⁷⁸ See Proposing Release, *supra* note 11, at 80291 n.304 ("Net capture" is the amount earned by the trading center for facilitating a transaction, which is typically the difference between the average access fee charged by the trading center and the average rebate paid by the trading center"). It is common practice across exchanges to fund their rebates with transaction fees. In principle rebates could exceed access fees as, unlike access fees, there is no regulatory cap restricting the rebates that can be offered. However, it is unlikely that trading venues would offer rebates in excess of the fees collected as doing so would expose them to the possibility of large losses. See *supra* note 1101 and accompanying text for further discussion on exchanges' net capture rates.

¹⁰⁷⁹ As can be seen from table 4, which presents information on access fees and rebates for the 16 operating exchanges, in practice the fee that is charged on an inverted fee venue to post liquidity is generally very close to the 30 mil access fee cap even though not constrained by Rule 610.

¹⁰⁸⁰ As can be seen from table 4, the only flat exchange (LTSE) is one that does not levy either a fee or rebate and prior to adopting a maker-taking fee model another exchange (IEX) had charged both sides of the transaction 9 mills. See Proposing Release, *supra* note 11, at 80311.

¹⁰⁸¹ See table 4 for information on how often exchanges amend their fees.

¹⁰⁸² See Proposing Release, *supra* note 11, at 80292.

¹⁰⁸³ See Letter from Richard Steiner, Electronic Trading Strategist, RBC Capital Markets, to Brent Fields, Secretary, Commission (Oct. 16, 2018), available at <https://www.sec.gov/comments/s7-05-18/s70518-4527261-176048.pdf> (commenting on the transaction fee pilot); see also the Fee Tiers Proposal, *supra* note 437.

order types for each trading venue to which the broker-dealer reports routing orders.¹⁰⁹¹ Additionally, Rule 606(b)(3) requires broker-dealers to produce reports pertaining to order handling upon the request of a customer that places, directly or indirectly, one or more orders in NMS stocks that are submitted on a not held basis, subject to a de minimis exception.¹⁰⁹² For each venue to which the broker-dealer routed the customer's orders, these reports require the broker-dealer to disclose, among other things, the average net execution rebate or fee for shares of orders providing liquidity and the average net execution rebate or fee for shares of orders removing liquidity.¹⁰⁹³ However, these reports provide market participants with information only on historical average transaction fees and rebates and may not accurately reflect the current exchange fees and rebates a market participant will encounter at the time of its transaction.¹⁰⁹⁴

c. Analysis of Current Access Fees and Rebates

The Commission analyzes, in table 4, current fee and rebate schedules, based on Rule 19b-4 filings with the Commission, for each of the equity exchanges operating in the United States as of February 8, 2024,¹⁰⁹⁵ as well as the transaction prices that each exchange posts.¹⁰⁹⁶ What is apparent from this analysis is that the current structure of fees and rebates is complex and constantly changing.¹⁰⁹⁷ Each exchange, except LTSE which does not charge transaction fees, filed an average of 13.6 Rule 19b-4 equity market fee filings with the Commission in 2023. Market participants interacting with all exchanges had to adjust to 218 total fee filings in 2023. Each filing can contain changes for numerous fee and rebate categories.

The effect of the 30 mils fee cap as an anchor point is also apparent. For most exchanges the maximum fee assessed, presumably for non-protected quotes, is

close to the 30 mils fee cap for protected quotes. The maximum rebate is generally in the vicinity of 30 mils, further suggesting the 30 mils access fee cap effectively limits what the exchanges offer as rebates. Some exchanges offer different access fees and rebate schedules for retail versus non-retail trades.¹⁰⁹⁸

Panel B of table 4 provides information on the exchange's fee schedules for stocks priced lower than \$1.00. For these transactions, the fee schedules tend to be simpler. Most exchanges do not offer a rebate for transactions lower than \$1.00 even if the exchange offers rebates for other transactions—only three exchanges offer any sort of baseline rebate.¹⁰⁹⁹ Additionally, the exchanges tend to charge an access fee of 0.1% with some also charging the maximum access fee of 0.3% of the share price. Only one exchange charges a fee of 0.1% to both sides of a transaction.

TABLE 4—SUMMARY OF TRANSACTION-BASED FEE SCHEDULES FOR U.S. NATIONAL EQUITIES EXCHANGES AS OF FEBRUARY 2024^a

Exchange	Fee model	Number of revisions 2023	Date of fee schedule	Fees (# of categories)	Rebates (# of categories)
Panel A: Fees and Rebates for Transactions Greater Than \$1.00					
Cboe BZX ^b	Maker-Taker	42	1/2/2024	\$0.0030 (1)	\$0.0016–\$0.0031 (7)
Cboe BYX ^c	Inverted	9	2/1/2024	\$0.0012–\$0.0020 (10)	\$0.0015–\$0.0020 (4)
Cboe EDGA ^d	Inverted	14	2/7/2024	\$0.0000–\$0.0030 (12)	\$0.0016–\$0.0024 (5)
Cboe EDGX ^e	Maker-Taker	44	2/1/2024	\$0.00275–\$0.0030 (3)	\$0.0020–\$0.0034 (8)
BX ^f	Inverted	6	2/1/2024	\$0.0020–\$0.0030 (2)	\$0.0005–\$0.0018 (7)
Phlx (PSX) ^g	Maker-Taker	4	2/1/2024	\$0.0030 (1)	\$0.0020–\$0.0033 (5)
Nasdaq ^h	Maker-Taker	6	2/1/2024	\$0.0030 (1)	\$0.0013–\$0.00305 (26)
NYSE Arca ⁱ	Maker-Taker	11	2/1/2024	\$0.0000–\$0.0030 (6)	\$0.0000–\$0.0032 (6)
NYSE American	Maker-Taker	7	1/3/2024	\$0.0025–\$0.0030 (3)	\$0.0016–\$0.0030 (3)
NYSE	Maker-Taker	16	1/12/2024	\$0.0000–\$0.00275 (5)	\$0.0004–\$0.0030 (11)
NYSE National	Inverted	5	1/3/2024	\$0.0022–\$0.0029 (4)	\$0.0007–\$0.0030 (5)
NYSE Chicago	Maker-Taker	3	1/8/2024	\$0.0010–\$0.0030 (1)	\$0.0000 (0)
IEX ^j	Maker-Taker	2	1/24/2024	\$0.0000–\$0.0010 (2)	\$0.0004 (1)
MEMX ^k	Maker-Taker	22	2/1/2024	\$0.00295–\$0.0030 (2)	\$0.0015–\$0.0033 (6)
MIAX Pearl ^l	Maker-Taker	10	1/17/2024	\$0.0024 (1)	\$0.00295 (1)
LTSE ^m	Free	NA	N/A	\$0.0000 (1)	\$0.0000 (1)

¹⁰⁹¹ Rule 606(a)(1) requires broker-dealers to report separate information for market orders, marketable limit orders, non-marketable limit order, and other orders. See 17 CFR 242.606(a)(1) for the items that need to be disclosed in reports under rule 606(a)(1).

¹⁰⁹² See 17 CFR 242.606(b)(3). In addition, under rule 606(b)(5)'s customer-level de minimis exception, broker-dealers need not provide upon request execution quality reports for customers that traded on average each month for the prior six months less than \$1,000,000 of notional value of not held orders in NMS stocks through the broker-dealer. See 17 CFR 242.606(b)(5).

¹⁰⁹³ See 17 CFR 242.606(b)(3)(iii) and (iv).

¹⁰⁹⁴ Reports under rule 606(a)(1) are produced by broker-dealers at the end of the quarter and disclose information on average fees and rebates for each month in that quarter. Reports issued by broker-dealers to their customers under rule 606(b)(3) disclose summarized information on the handling

of the customer's orders for each calendar month over the prior six months. The broker-dealer must issue these reports to the customer within seven business days of receiving the customer's request.

¹⁰⁹⁵ Table 4 is constructed using the same methodology as table 5 of the Proposing Release, *supra* note 11, at 80311; the only difference is that table 4 herein uses data as of Feb. 2024 and computes fee revisions during the 2023 calendar year, whereas table 5 of the Proposing Release used data as of May 2022 and computed annual fee revisions from 2018 to June of 2022. Any differences between these two tables are due to changes in exchange fee schedules from May 2022 to Feb. 2024.

¹⁰⁹⁶ Panel A of table 4 provides the category of exchange, maker-taker, inverted, or flat/free, the number of fee revisions since Jan. 2018 as indicated by the number of transaction fee specific rule 19b-4 filings that the exchange has filed with the Commission, the date that each exchange's website

states that the fee schedule posted there is effective and the range of fees and rebates along with the number of categories of fees and rebates for transactions priced equal to, or greater than, \$1.00 per share.

¹⁰⁹⁷ Some commenters have also stated that current transaction pricing practices introduce complexity into the market and reduce transparency. See Themis Letter at 7; BMO Letter at 3.

¹⁰⁹⁸ See, e.g., New York Stock Exchange (NYSE), *Equity Fees and Charges*, NYSE.com, available at https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf (accessed June 18, 2024); see also Virtu Letter II at 23 suggesting that the Commission could consider an alternative which would allow exchanges to offer differing fee schedules to retail and non-retail orders.

¹⁰⁹⁹ The three are Cboe EDGX, MEMX, and MIAX Pearl.

Exchange	Fee Model	Rebate	Fee (%)	Charged both sides
Panel B: Fees and Rebates for Transactions Under \$1.00				
Cboe BZX	Maker-Taker	0	0.30	Yes.
Cboe BYX	Inverted	0	0.10	
Cboe EDGA	Inverted	0	0	
Cboe EDGX	Maker-Taker	0.00009 (per share)	0.30	
BX	Inverted	0	0.10	
Phlx (PSX)	Maker-Taker	0	0.30	
Nasdaq	Maker-Taker	0	0.30	
NYSE Arca	Maker-Taker	0	0.10	
NYSE American	Maker-Taker	0	0.10	
NYSE	Maker-Taker	0	0.10	
NYSE National	Inverted	0	0	
NYSE Chicago	Maker-Taker	0	0.10	
IEX	Maker-Taker	0	0.09	
MEMX	Maker-Taker	0.075% (of value)	0.10	
MIAX Pearl	Maker-Taker	0.15% (of value)	0.250	
LTSE	Free	0	0	

^a The number of fee revisions is obtained by counting each Rule 19b-4 filing for each exchange that is not clearly marked for a non-transaction fee related purpose such as connectivity fees, listing fees, options fees, etc. To determine the fee and rebate information, the staff searched each exchange's webpage for its current posted access fee and rebate schedule and collected information on access fees and rebates pertaining to non-auction trading in stocks priced equal to, or greater than, \$1.00 per share. Sources for Current Access Fee Data were effective on the dates shown in panel A of table 4, and were accessed during February 2024 at the websites shown beneath the table.

^b https://www.cboe.com/us/equities/membership/fee_schedule/bzx/.

^c https://www.cboe.com/us/equities/membership/fee_schedule/byx/.

^d https://www.cboe.com/us/equities/membership/fee_schedule/edga/.

^e https://www.cboe.com/us/equities/membership/fee_schedule/edgx/.

^f https://www.nasdaqtrader.com/trader.aspx?id=bx_pricing.

^g https://www.nasdaqtrader.com/trader.aspx?id=psx_pricing.

^h <https://www.nasdaqtrader.com/Trader.aspx?id=PriceListTrading2>.

ⁱ All NYSE Exchange Family fees: <https://www.nyse.com/markets/fees>.

^j <https://exchange.iex.io/resources/trading/fee-schedule/>. (Note: that the majority of IEX trading occurs via non-displayed orders. IEX only pays rebates on displayed orders.)

^k <https://info.memxtrading.com/equities-trading-resources/us-equities-fee-schedule/>.

^l https://www.miaxglobal.com/sites/default/files/fee_schedule-files/MIAX_Pearl_Equities_Fee_Schedule_01172024.pdf.

^m <https://ltse.com/trading/faqs>.

Complex fee schedules and volume-based tiers mean that it is difficult for the Commission to determine the net capture on a given exchange (the difference between average fees levied and rebates paid).¹¹⁰⁰ Additionally, financial statements for exchange groups generally do not break down performance on a per-venue level and the financial statements generally combine auction access fees collected with regular trading access fees. Furthermore, some exchanges are privately held and thus do not release the same financial statements that public exchanges do. Using information from the financial statements of the three major exchange groups which collectively account for the overwhelming majority of trading volume on exchanges, the Commission estimates that the average total net capture is around 4 mils for all trading types.¹¹⁰¹ However, the Commission understands based on staff conversations with industry members

that the net capture for non-auction trading in stocks that have a price equal to or greater than \$1.00 is likely close to 2 mils on most exchanges,¹¹⁰² and in the analysis in later sections where the net capture needs to be assumed, we use 2 mils unless otherwise stated.¹¹⁰³ A commenter agreed stating that the net fee is typically only 2 mils per share, stating, “it is worth pausing to reflect on just how competitive this net fee is—this is about as close to Bertrand price competition as one sees.”¹¹⁰⁴ Another commenter reported estimated trading related “all-in” costs to trade ranging 1.9 to 3.4 mils over the 2017 to 2021 period for the three largest exchange groups (Cboe, Nasdaq, and NYSE);¹¹⁰⁵ these estimates are broadly in line with the estimated net-capture rates and consistent with the 2 mil net capture rate assumption used in the subsequent analysis.¹¹⁰⁶ Given the low net capture rate of 2 mils on most exchanges, the primary reason that access fees remain near 30 mils on most exchanges is likely

to fund rebates.¹¹⁰⁷ For stocks trading below \$1.00 the Commission estimates an average net capture of around 0.24% of the transaction volume.¹¹⁰⁸ This amount is close to the 0.30% access fee cap and arises because, as seen in panel B of table 4, much of the trading for sub \$1.00 priced volume takes place on exchanges which set their baseline fee at or near 0.30% but do not offer baseline rebates for transactions under \$1.00. On a per-share basis, this net capture of 0.24% of transaction dollar volume corresponds to a net capture of 7.3 mils.¹¹⁰⁹

Table 5 presents tabulations of the total share (Panel A) and dollar (Panel B) trading volume executed on the 16 exchanges in 2023.¹¹¹⁰ This table provides estimates for the total volume that executed below \$1.00, and that which executed above \$1.00. These numbers represent an estimate of the total number of shares that will have been subject to the access fees and rebates discussed in this release.

TABLE 5—TRADING VOLUME BY EXCHANGE, EXCHANGE TYPE 2023^a

Exchange name	Exchange type	<\$1 Volume (billions)	>=\$1 Volume QS<= \$0.015 (billions)	>=\$1 Volume QS > \$0.015 (billions)	% of Exchange volume
Panel A: Share Volume					
Off-Exchange		192.9	620.3	241.3	
Nasdaq	Maker-Taker	26.8	226.2	88.9	26.9
NYSE Arca	Maker-Taker	27.5	139.3	30.4	15.5
NYSE	Maker-Taker	3.4	127.4	37.4	13.2
Cboe BZX	Maker-Taker	14.0	86.3	20.9	9.5
Cboe EDGX	Maker-Taker	21.1	98.2	23.3	11.2
MEMX	Maker-Taker	8.1	61.9	12.0	6.5
IEX	Maker-Taker	1.7	38.9	19.5	4.7
Cboe EDGA	Inverted	2.7	33.8	5.6	3.3
Cboe BYX	Inverted	2.6	20.4	2.8	2.0
MIAX Pearl	Maker-Taker	2.4	41.9	2.7	3.7
NYSE National	Inverted	0.5	11.0	1.4	1.0

¹¹⁰⁰ Volume-based tiers imply that the net capture varies by exchange member. To calculate an exchange's net capture would require knowing the number and types of orders that are executed by each member, mapping these orders to the exchange's fee schedule, calculating the net capture for each member, and then aggregating the net capture over all exchange members.

¹¹⁰¹ Intercontinental Exchange, the parent firm of NYSE, reports on page 53 of its 2021 Form 10-K filing that their net capture for U.S. equity transactions was approximately 4.2 mils in 2021. Nasdaq did not report its net capture in its Form 10-K filing, however Nasdaq provides information on its investor relations web page which, when we average the relevant 2021 volumes, indicates that the average net capture across all Nasdaq platforms for U.S. equity transactions was 5.9 mils. See *Nasdaq 2022/2021 Monthly Volumes*, Nasdaq, available at <https://ir.nasdaq.com/static-files/465d2157-c476-4546-a9f7-8d7ad0c9be77>. Cboe reports in its Form 10-K filing that its net capture for U.S. equity transactions was approximately 2 mils.

¹¹⁰² Non-auction orders exclude opening, closing, and reopening auctions. See table 7, note a for additional details regarding which orders are considered for estimation.

¹¹⁰³ One commenter stated that exchanges subsidize rebates with other sources of revenue as manifest by the fact that some market participants could receive rebates in excess of the 30 mil fee cap. See *Healthy Markets Letter I* at 23. Table 4 presents evidence consistent with the notion that in some cases rebates received may be in excess of 30 mils. However, the commenter did not provide any analysis to suggest that the net capture of the exchanges was, on average, negative. As discussed, the Commission believes that most exchanges, on average, earn approximately 2 mils per transaction priced greater than \$1.00. One exception is IEX which earns an estimated 6 mils based on the information in table 4.

¹¹⁰⁴ See *Budish Letter* at 3. Bertrand competition is an economics model of competition on the basis of prices whereby firms set their price—net price in this instance—at marginal cost.

¹¹⁰⁵ The commenter also included similar estimates for IEX which ranged from 6.8–8.9 mils, see *Nasdaq Letter II* at 3.

¹¹⁰⁶ Subsequent analysis in section VII.D.2 assumes that the assumed 2 mil net capture will continue to be valid following the implementation of the amendments.

¹¹⁰⁷ See *Retirement Coalition Letter* at 1 (“in practice, this ‘cap’ has come to be used as the standard rate charged to access quotes at most exchanges, and almost all of those fees are then ‘rebated’ to liquidity providers”).

¹¹⁰⁸ The estimate for the 0.24% net capture is obtained by taking the total estimated net transaction fee across all exchanges for trading in shares priced below \$1.00 (\$83.2 million) and dividing this number by the total sub \$1.00 dollar volume from Panel B of table 5 below (\$34.2 billion). $100 \times 83.2 \text{ million} / 34.2 \text{ billion} = 0.24\%$.

¹¹⁰⁹ To estimate the net capture in terms of mils, the Commission divides the dollar revenue from fees by the number of shares traded. The dollar net capture is 0.24%, see *id.*, and the dollar volume is \$34.2 billion, see table 5, Panel B, resulting in a dollar revenue of \$82 million ($0.0024 \times \$34.2 \text{ billion}$). With share volume of 112.6 billion, see table 5, Panel A, the net capture is 7.3 mils ($\$82 \text{ million} / 112.6 \text{ billion}$).

¹¹¹⁰ Table 5 is constructed using the same methodology as table 6 of the *Proposing Release*, *supra* note 11, at 80313; table 5 herein uses data for 2023, whereas table 6 of the *Proposing Release* used data for the first half of 2022.

TABLE 5—TRADING VOLUME BY EXCHANGE, EXCHANGE TYPE 2023^a—Continued

Exchange name	Exchange type	<\$1 Volume (billions)	>=\$1 Volume QS<= \$0.015 (billions)	>=\$1 Volume QS > \$0.015 (billions)	% of Exchange volume
Nasdaq OMX PSX	Maker-Taker	0.3	7.5	1.9	0.8
Nasdaq OMX BX	Inverted	0.5	6.7	2.6	0.8
NYSE American	Maker-Taker	1.0	4.8	1.0	0.5
NYSE Chicago	Flat	0.2	0.8	1.8	0.2
LTSE	Flat	0.0	0.0	0.0	0.0
Total .....	.....	305.5	1,525.4	493.5	
Exchange Total .....	.....	112.6	905.1	252.2	

Panel B: Dollar Volume

Off-Exchange .....	.....	65.3	19,744.9	24,508.4	
Nasdaq (TapeC)	Maker-Taker	9.1	9,008.3	9,402.3	30.4
NYSE Arca	Maker-Taker	7.6	6,433.3	3,107.1	15.8
NYSE	Maker-Taker	1.5	3,985.9	3,658.6	12.6
Cboe BZX	Maker-Taker	3.1	3,711.6	2,479.9	10.2
Cboe EDGX	Maker-Taker	6.2	3,450.0	2,371.1	9.6
MEMX	Maker-Taker	2.5	2,148.8	1,130.4	5.4
IEX	Maker-Taker	0.8	1,383.8	2,119.0	5.8
Cboe EDGA	Inverted	1.0	1,038.0	494.8	2.5
Cboe BYX	Inverted	0.9	657.2	275.3	1.5
MIAX	Maker-Taker	0.7	1,297.3	268.4	2.6
NYSE National	Inverted	0.2	287.3	131.0	0.7
Nasdaq OMX PSX	Maker-Taker	0.1	368.9	211.9	1.0
Nasdaq OMX BX	Inverted	0.2	274.9	258.7	0.9
NYSE American	Maker-Taker	0.4	165.5	97.7	0.4
NYSE Chicago	Flat	0.1	39.6	236.0	0.5
LTSE	Flat	0.0	1.5	1.6	0.0
Total .....	.....	99.4	53,996.9	50,752.2	
Exchange Total .....	.....	34.2	34,252.0	26,243.9	

^a This table aggregates all trade information from the TAQ database for every trading day in 2023. Only trading volume reflecting normal trades during regular trading is included. Normal trades are identified in TAQ data by sale conditions “blank, @, E, F, I, S, Y” which correspond to regular trades, intermarket sweep orders, odd-lot trades, split trades, and yellow flag regular trades. The remaining share volume was aggregated by exchange, and the table denotes exchange type (maker-taker, inverted, flat, free). Share and dollar volume from exchange codes T and Q were combined into ‘Nasdaq.’ Panel A presents share volume totals and panel B presents dollar volume totals. Certain items in table 5 may also be affected by the MDI Rules once they are fully implemented. See *infra* section VII.C.3.

Transaction fees for trades in stocks priced equal to or greater than \$1.00 are generally levied per share transacted. From table 5 we see that in 2023, there were approximately 2 trillion shares transacted at prices equal to or greater than \$1.00 per share across all venues, 57% of which (1.16 trillion shares) were executed on a registered exchange.¹¹¹¹ Of these on-exchange transactions priced equal to or greater than \$1.00 per share, approximately 78% were in stocks with quoted spreads of \$0.015 or

less.¹¹¹² These numbers provide the basis for estimating the total amount of access fees and rebates collected and distributed in transactions priced equal to, or greater than, \$1.00 per share. For transactions less than \$1.00 per share the access fee is generally levied as a percent of the transaction share price. In panel B we see that in 2023 there was approximately \$34 billion transacted on exchanges in shares priced less than \$1.00 per share.

Panels A and B of table 6 break down the share and dollar volume statistics presented in table 5 by venue type: maker-taker, inverted, and flat/free.¹¹¹³ The overwhelming majority (over 90%) of both dollar and share exchange trading volume occurs on maker-taker venues. Inverted exchanges capture about 5–7% of dollar and share volume, and the remaining share volume transact on flat/free exchanges.

¹¹¹¹ 2T = shares 1.5T narrow spread shares + 493 billion wider spread shares. Also, off-exchange trading volume has increased in recent years. See, e.g., Jonathan Brogaard & Jing Pan, *Dark Pool Trading and Information Acquisition*, 35 Rev. Fin. Stud. 2625 (2022).

¹¹¹² The fourth column of Panel A shows 905.1 billion shares traded on exchanges with a price

greater than or equal to \$1.00 and a quoted spread of \$0.015 or less; the fifth column shows 252.2 billion shares traded on exchanges with a price greater than or equal to \$1.00 and a quoted spread over \$0.015. The total number of shares traded on exchanges with a price greater than or equal to \$1.00 is therefore 1157.3 billion (905.1+252.2), and

the fraction of these that a spread of \$0.015 or less is 78% (905.1/1157.3).

¹¹¹³ Table 6 is constructed using the same methodology as table 7 of the Proposing Release, *supra* note 11, at 80314. The only difference is that table 6 herein uses data for 2023, whereas table 7 of the Proposing Release used data for the first six months of 2022.

TABLE 6—VOLUME BY EXCHANGE TYPE AND ESTIMATED ACCESS FEE/REBATE ESTIMATES 2023^a

	Price<\$1 (billions)	Price>\$1; TWAQS ≤ \$0.015 (billions)	Price>\$1; TWAQS > \$0.015 (billions)	% Total
Panel A: Exchange Share Volume by Venue Type				
Maker-Taker	106.2	832.4	237.9	92.7
Inverted	6.2	71.9	12.4	7.1
Flat/Free	0.2	0.8	1.8	0.2
Panel B: Exchange Dollar Volume by Venue Type				
Maker-Taker	31.9	31,953.4	24,846.4	93.9
Inverted	2.2	2,257.4	1,159.8	5.6
Flat/Free	0.1	41.1	237.6	0.5
Panel C: Estimated Fees Collected and Rebates Distributed (Billions)				
Fees Collected		\$3.41		
Rebates Distributed		\$3.08		
Exchange Capture		\$0.34		
Panel D: Total Estimated Net Fees by Liquidity Type (Billions)				
Demanders		\$2.97		
Providers		(\$2.63)		
Exchange Capture		\$0.34		

^a Certain items in this table 6 may also be affected by the amendments in the MDI Rules once they are fully implemented. See *infra* section VII.C.3.

Panel C provides an estimate of the total amount of access fees collected and rebates distributed.¹¹¹⁴ In 2023 there were an estimated \$3.41 billion in access fees collected across all exchanges and \$3.08 billion in rebates distributed, resulting in a net capture to all exchanges of \$340 million.

Panel D of table 6 provides estimates of the net access fee paid by liquidity demanders and liquidity suppliers.¹¹¹⁵

¹¹¹⁴ These estimates are computed by assuming a 30 mil access fee and 28 mil rebate on all transactions that occur on maker-taker or inverted exchanges and a 10 mil access fee (and 4 mil rebate) on the volume priced equal to, or greater than, \$1.00 per share that occurs on IEX. For trading in sub \$1.00 transactions, the various access fees and rebates for each exchange presented in Panel B of table 4 are multiplied by the corresponding dollar volume of trade in transactions priced less than \$1.00 per share to compute the total access fees collected and rebates distributed for this volume. The figures are summed together to provide the estimates of total access fees collected and rebates distributed.

¹¹¹⁵ This estimate presumes that for shares transacted in prices equal to or greater than \$1.00 per share on maker-taker venues the liquidity demander pays a 30 mil access fee and the liquidity provider receives a 28 mil rebate. On inverted exchanges the opposite occurs. On IEX it is presumed that liquidity demanders pay an 8 mil access fee and liquidity providers receive no rebate. For trading in sub \$1.00 transactions the various access fees and rebates for liquidity suppliers and demanders are computed by taking the respective fees and rebates for sub \$1.00 transactions for each exchange presented in Panel B of table 4 and multiplying them by the corresponding dollar volume of trade in transactions priced less than \$1.00 to compute the total access fees collected and rebates distributed for liquidity-providing and demanding trades. The figures are summed together

In 2023 liquidity demanders paid an estimated \$2.97 billion in net access fees and liquidity providers received an estimated \$2.63 billion in rebates. The difference of \$340 million is the exchanges' estimated net capture.

Although not subject to Rule 610(c), because they do not post protected quotes, ATSs also often assess transaction fees.¹¹¹⁶ As of the third quarter of 2023 there were 32 ATSs that reported trading volume to FINRA transacting a total of 73 billion shares.¹¹¹⁷ Unlike exchanges, the fees that ATSs charge generally do not have a standard structure and are often negotiated between the ATS and the customer. Based on a review of item 19 in form ATS-N, ATSs generally do not provide rebates, and when transaction fees are explicitly discussed, they are often in the range of 10 mils.¹¹¹⁸

to provide the estimates of total access fees collected and rebates distributed.

¹¹¹⁶ IntelligentCross ATS, for example, offers matching processes for all NMS stocks eligible for trading, and disseminates bids and offers in real-time to subscribers to the ATS's proprietary data feed, but these are not protected quotes. See IntelligentCross, Form ATS-N, Item 15 (Display) (dated Apr. 11, 2022) available at https://www.sec.gov/Archives/edgar/data/1708826/000170882622000002/xsl/ATS-N_X01/primary_doc.xml.

¹¹¹⁷ See FINRA, *ATS Transparency Data Quarterly Statistics*, available at <https://www.finra.org/filing-reporting/otc-transparency/ats-quarterly-statistics>.

¹¹¹⁸ See *infra* note 1442 for commenter discussion on ATS transaction fees. See also IEX Letter VI at 5 for additional analysis supporting the conclusion

Table 4 indicates that many exchanges charge the maximum allowed fee, rebating nearly all of it as a compensation for liquidity provision. One commenter states, "access fees have been uniquely impervious to market forces."¹¹¹⁹ Rule 611 generally causes marketable orders to be routed to those markets displaying the best-priced quotations.¹¹²⁰ As discussed in section

that 10 mils is a representative transaction fee among ATSs.

¹¹¹⁹ See IEX letter V at 2, 3. See also *Proposing Release*, *supra* note 11, at 80305.

¹¹²⁰ More specifically, Rule 611 requires trading centers to have policies and procedures that reasonably prevent trade-throughs. See *Proposing Release*, *supra* note 11, at 80286. A trade-through is a trade that executes at a price lower than a protected bid or higher than a protected offer. The NBBO is set by the best protected bid and offer; therefore, a trade that executes outside the NBBO is a "trade-through." If an exchange does not have a limit order at the best quote, then it cannot execute against an incoming marketable order; rather the exchange would generally need to cancel the order or route it to another exchange with the best quote. The routing of marketable orders is prevalent. A recently published academic article finds that 34% of market orders sent to the NYSE in 2010–11 are routed. See Sida Li et al., *Refusing the Best Price?* 2 J. FIN. ECON. 147 (February 2023). For example, suppose two liquidity providers want to sell a share in exchange for \$10.002, net of fees and rebates. Suppose the first seller posts at exchange X, which offers a 30mil rebate, while the second seller posts at exchange Y, which offers a 10mil rebate. The seller on exchange X is willing to quote at \$10.00 to receive a net price of \$10.003, while the seller on Y is not willing to quote at \$10.00 because the net price would be only \$10.001—the seller on Y must quote at \$10.01. Rule 611 will therefore direct marketable orders to the lower quoted price at exchange X.

VII.B.3, a liquidity provider is generally indifferent between receiving compensation in the form of a rebate or in the form of a quoted spread, implying that an exchange can use rebates to induce quoting lower spreads, and hence the best prices.¹¹²¹ The exchange can fund the rebate with an access fee charged to the liquidity demander, relying on Rule 611 to reduce the loss of liquidity demanding customers that would otherwise occur from such an increase in prices.¹¹²² The exchanges profit from the difference between the access fees collected and the rebates paid. Were exchanges to unilaterally lower their access fees and rebates (without other exchanges making similar changes), liquidity providers would likely route their orders to another exchange.¹¹²³ Notably, research surrounding a Nasdaq experiment where it unilaterally lowered fees and rebates found that Nasdaq lost market share to other maker-taker venues with a higher rebate.¹¹²⁴ Table 4 also shows that even the maximum rebates are close to the access fees; doing otherwise would likely be unprofitable or risky.¹¹²⁵

As discussed in the Proposing Release, and as table 4 shows, the NYSE, Nasdaq, and Cboe exchange families each operate both a maker-taker venue as well as an inverted venue.¹¹²⁶ Commenters state that inverted venues

can be used to achieve intra-tick pricing.¹¹²⁷ Specifically, the net price of a trade is the quoted price adjusted for exchange fees and rebates; the quoted price is constrained by the tick, but the net price can be between ticks.¹¹²⁸ To the extent that intra-tick pricing on inverted venues is a solution to the quoted price being constrained by the tick, it is a costly one. First, quote protection applies to the quoted bid or ask, not the net cost, implying that routing a market order to an inverted venue runs the risk of the order being routed elsewhere if the inverted venue is not at the NBBO. Research shows that inverted venues are less likely to be at the NBBO, a result that follows from revenue from rebates and from spreads being interchangeable assuming the market participant receives both.¹¹²⁹ As explained in section VII.D.1.b.ii, this leads to delays and increased cost.

Second, the existence of inverted venues fragments liquidity compared to the situation where an exchange is able to offer orders to be placed at multiple prices within the quoted spread. One commenter agreed when discussing inverted venues, stating that: “different exchanges are optimal to use for different prices within the penny, which is a recipe for artificial fragmentation, a confusing paper trail, and overall excess complexity. Excess complexity, in turn, is a recipe for excess rents, agency conflict and distrust.”¹¹³⁰

Lastly, one commenter stated that exchanges could circumvent barriers associated with the tick size and access fees through innovation, such as new order types.¹¹³¹ The commenter stated that: “Lastly, if the tick size were really a significant barrier to competition for exchanges, they could innovate solutions to solve for this. For example, exchanges could develop an order type that functions within the current structure (limit order pricing and

priority-ranked based on even penny ticks) but where an order could provide sub-penny price improvement if matched to a marketable order from a counterparty that met certain objective conditions (such as being sourced from a retail customer).”¹¹³² The commenter proceeded to describe a second novel order type that could allow for sub-penny price improvement through reduced access fees for retail investors.¹¹³³ The order types the commenter lists as examples appear to solve for the specific problem of retail investors achieving price improvement on exchange, a solution that already exists through RLPs (though which do not have significant volume).¹¹³⁴ It is possible that a new order type designed to mitigate this problem might not work as intended. In contrast, allowing for more ticks in certain stocks as the Commission is adopting is a more straightforward and predictable way of achieving the same ends without requiring the need for order types designed to allow for sub-tick executions on exchanges.

3. Round Lots, Odd-Lots, and Market Data Infrastructure

Currently, information on odd-lot quotes inside the NBBO is available only to investors who subscribe to proprietary data feeds, and comprehensive odd-lot information is only available to market participants who subscribe to the proprietary data feeds of all the exchanges. The implementation of the MDI Rules will include odd-lot information inside the NBBO.¹¹³⁵ The MDI Rules also defined a round lot, which previously had not been defined in a Commission rule. Specifically, the MDI Rules establish a uniform round lot size of 100 shares for stocks priced \$250 or less; 40 shares for stocks priced greater than \$250 and less than or equal to \$1,000; 10 shares for stocks priced greater than \$1,000 and less than or equal to \$10,000; finally, 1 share for stocks priced greater than \$10,000. These amendments modify the round lot definitions set by the MDI Rules by changing the evaluation period in which a stock's share price is measured. The MDI Adopting Release defined round lots based on the stock's average price in the preceding month—i.e., a stock's round lot was updated every month based on the most recent month's data. These amendments

¹¹²¹ See Proposing Release, *supra* note 11, at 80305 (“the NBBO restricts the routing behavior of marketable orders and often forces liquidity demanders to pay the access fee to trade against a NBBO order. Exchanges are thus incentivized to attract more competitively priced liquidity with large rebates, which are funded by similarly large access fees, in order to capture more trading volume”). The high rebate allows the liquidity supplier to offer a better quoted price—i.e., a higher bid or a lower offer—because the liquidity supplier only cares about the total proceeds from the sale (the liquidity supplier does not care whether the proceeds take the form of a rebate).

¹¹²² That is, the need to execute against the protected quote first, before executing at other prices, would maintain a strong incentive for broker-dealers to route orders to the exchange, even in the face of high access fees.

¹¹²³ See Proposing Release, *supra* note 11, at 80305 n.457.

¹¹²⁴ See *id.*; see also Yiping Lin, et al., *A Model of Maker-Taker Fees and Quasi-Natural Experimental Evidence* (working paper Feb. 8, 2021), available at <https://ssrn.com/abstract=3279712> (retrieved from SSRN Elsevier database). Consequently, it could be harmful to an exchange to unilaterally reduce access fees and their associated rebates if other exchanges do not follow suit. Further, even if each of the exchanges lowered its fees, there would be the risk that a new exchange would see the opportunity and enter the market with high fees and rebates and thus capture market share, inducing the other exchanges to abandon their low fee models to remain competitive.

¹¹²⁵ See discussion in section VII.D.2.b.

¹¹²⁶ See Proposing Release, *supra* note 11, at 80313.

¹¹²⁷ See Larry Harris, *Quarter Penny Tick* (working paper, Mar. 9, 2022) attached to Letter from Larry Harris (“Quarter Penny Tick”).

¹¹²⁸ Suppose an exchange family operates both a maker-taker venue and an inverted venue; further suppose that the maker-taker venue offers a 30mil rebate to liquidity suppliers, while the inverted venue charges a 30mil fee to liquidity suppliers. Liquidity suppliers would therefore be able to transact at two different net prices within the tick—e.g., the liquidity supplier could offer to sell at \$10.00 on the maker-taker venue, which would result in a net price of \$10.003; or the liquidity supplier could offer to sell at \$10.00 on the inverted venue to net \$9.997. The variation in fee schedules across the venues therefore allows for intra-tick pricing. See also *supra* section VII.C.2.b for a discussion of current state of the fees and rebates and the variation in pricing structure across exchanges.

¹¹²⁹ See IEX Letter I at 14.

¹¹³⁰ See Budish Letter at 4.

¹¹³¹ See Virtu Letter II at 23.

¹¹³² See *id.*

¹¹³³ See *id.*

¹¹³⁴ See *supra* section VII.C.1.a for further discussion of exchange RLP programs.

¹¹³⁵ See *supra* section VI.C and section V.E for discussions on the expected time of the implementation of the MDI Rules.

update round lots every six months, with the round lot determined by the stock's average price with a one-month lag—*i.e.*, a stock's round lot is updated in May of every year using its average stock price in March, and the round lot is updated again in November using its average stock price in September.

In the MDI Adopting Release, the Commission established a transition period for the implementation of the MDI Rules.¹¹³⁶ The Commission's approval of the MDI Plan Amendments will be the starting point for the rest of the MDI implementation schedule.¹¹³⁷ After approval of the MDI Plan Amendments, the next step will be a 180-day development period, during which competing consolidators can register with the Commission.¹¹³⁸ Based on the times provided in the transition plan for implementation of the MDI Rules, the Commission estimated that the full implementation of the MDI Rules will be at least two years after the Commission's approval of the plan amendment(s) required by Rule 614(e).¹¹³⁹

The Operating Committees of the CTA/CQ Plan and UTP Plan filed the MDI Plan Amendments on November 5, 2021.¹¹⁴⁰ The Commission disapproved the proposed amendments on September 21, 2022.¹¹⁴¹ As a result, the participants to the effective national market system plan(s) will need to develop and file new proposed amendments as required by Rule 614(e),¹¹⁴² before the implementation period prescribed by the phased transition plan can commence. Because the implementation of the MDI Rules has been delayed, the end date of the implementation period cannot be estimated with certainty.

The following discussion reflects the Commission's assessment of the anticipated economic effects of the MDI Rules described in the MDI Adopting Release as they relate to the baseline for the adoption of these amendments.¹¹⁴³ The MDI Rules are part of the regulatory baseline for this rule because they have been adopted. Given that the MDI Rules have not yet been implemented, they have not affected market practice and therefore data that would be required for a quantitative analysis of a baseline that includes the effects of the MDI Rules is not available. It is possible that the baseline for this rule, and therefore the economic effects relative to the baseline, could be different depending on how the MDI Rules are implemented.¹¹⁴⁴

When adopting the MDI Rules, the Commission enumerated numerous economic effects specifically related to changing the round lot definition and including odd-lot information as a part of core data. For the change in the definition of round lots, these effects included: (1) a mechanically tighter NBBO for higher priced stocks due to the redefinition of the round lot sizes,¹¹⁴⁵ (2) increased transparency and better order execution,¹¹⁴⁶ and (3) potentially more orders for high priced stocks being routed to exchanges instead of ATSs.¹¹⁴⁷ The costs of changing the round lot definition included upgrading systems to account for additional message traffic, and modifying and reprogramming systems.¹¹⁴⁸ The Commission also discussed the expected effect that changing the round lot definition will have on other rules and regulations.¹¹⁴⁹

For the inclusion of odd-lot information inside the NBBO in core data,¹¹⁵⁰ these effects include reducing

information asymmetries between investors who currently have access to odd-lot information through proprietary data feeds and those who do not, leading to better order execution and price efficiency.¹¹⁵¹ Providing an alternative to proprietary data for some market participants will allow these market participants to reduce data expenses required for trading.¹¹⁵² The costs of including odd-lot information inside the NBBO include:¹¹⁵³ the cost of upgrading existing infrastructure and software to handle the dissemination of additional core data message traffic; the cost to SROs to implement system changes required in order to make regulatory data and other data needed to generate consolidated market data available to competing consolidators; the cost of technological investments market participants might have to make in order to receive the new core message traffic; and the cost to users of proprietary data whose information advantage will dissipate somewhat.¹¹⁵⁴

The MDI Rules do not require the competing consolidators to disseminate odd-lot information. However, the Commission estimated that at least one competing consolidator will disseminate the odd-lot information because the Commission believed that there will be demand for the data.¹¹⁵⁵

4. Affected Entities and Markets

The amendments will affect trading in NMS stocks, particularly either on exchanges that charge high access fees or in stocks with lower quoted spreads, many odd-lots inside the spread, or higher prices. Therefore, the amendments will affect a wide variety of market participants, including national securities exchanges, other trading venues, exclusive SIPs and their data users, any future competing consolidators, broker-dealers operating order entry and order routing systems, and others who engage in the trading of NMS stocks, including investors.¹¹⁵⁶

¹¹⁵¹ *Id.*

¹¹⁵² *Id.*

¹¹⁵³ See MDI Adopting Release, *supra* note 10, at 18759 for the full discussion of the costs associated with expanding core data to include odd-lot information inside the NBBO.

¹¹⁵⁴ *Id.*

¹¹⁵⁵ See MDI Adopting Release, *supra* note 10, at 18752 n.1945 and surrounding text.

¹¹⁵⁶ According to the 2022 Survey of Consumer Finances, available at https://www.federalreserve.gov/econres/scfindex.htm?mod=article_inline, out of a total number of households of approximately 131,000,000, 58% invested in equities in some fashion (e.g., held stock directly, invested in a stock mutual fund, etc.). Bd Gov. Fed. Res., Changes in U.S. Family Finances from 2019 to 2022: Evidence from the Survey of Consumer Finances (Oct. 2023) at 19, available at

¹¹³⁶ See MDI Adopting Release, *supra* note 10, at 18698–18701.

¹¹³⁷ See *id.* at 18698.

¹¹³⁸ See *id.* at 18699–18700.

¹¹³⁹ See *id.* at 18700–18701.

¹¹⁴⁰ The Operating Committees of CTA Plan and UTP Plan filed proposed amendments on Nov. 5, 2021, which were published for comment in the **Federal Register**. See Securities Exchange Act Release Nos. 93615 (Nov. 19, 2021), 86 FR 67800 (Nov. 29, 2021); 93625 (Nov. 19, 2021), 86 FR 67517 (Nov. 26, 2021); 93620 (Nov. 19, 2021), 86 FR 67541 (Nov. 26, 2021); 93618 (Nov. 19, 2021), 86 FR 67562 (Nov. 26, 2021).

¹¹⁴¹ See Securities Exchange Act Release Nos. 95848 (Sept. 21, 2022), 87 FR 58544 (Sept. 27, 2022); 95849 (Sept. 21, 2022), 87 FR 58592 (Sept. 27, 2022); 95850 (Sept. 21, 2022), 87 FR 58560 (Sept. 27, 2022); 95851 (Sept. 21, 2022), 87 FR 58613 (Sept. 27, 2022).

¹¹⁴² The Commission ordered the exchanges and FINRA to file a new plan regarding consolidated market data on Sept. 1, 2023. On Jan. 19, 2024, the Commission published notice of filing of a National Market System Plan for Consolidated Equity Market Data. See *supra* note 78.

¹¹⁴³ See MDI Adopting Release, *supra* note 10, at 18741–18799.

¹¹⁴⁴ Commission staff will review and study the effects of the amendments adopted herein. See the introduction to section VII.D.

¹¹⁴⁵ See MDI Adopting Release, *supra* note 10, at 18743 for the full discussion of the effect of changing the round lot size on the NBBO.

¹¹⁴⁶ See MDI Adopting Release, *supra* note 10, at 18744, 18747 for the full discussion of the effect of changing the round lot size on transparency and execution quality.

¹¹⁴⁷ See MDI Adopting Release, *supra* note 10, at 18747 for the full discussion of the effect of changing the round lot size on exchange competition and order routing.

¹¹⁴⁸ See MDI Adopting Release, *supra* note 10, at 18748 for the full discussion of the expected costs of changing the round lot size.

¹¹⁴⁹ See MDI Adopting Release, *supra* note 10, at 18749 for the full discussion of the effect of changing the round lot size on other rules and regulations.

¹¹⁵⁰ See MDI Adopting Release, *supra* note 10, at 18753 for the full discussion of the effect of including odd-lot information inside the NBBO in its definition of core data.

There are 16 national securities exchanges on which NMS stocks are traded that will be affected by the amendments. The exchanges compete with each other and other trading venues to attract order flow. Exchanges compete by setting the rules that dictate how orders routed to them interact given the broader requirements of the Exchange Act and rules thereunder. Such rules are coded into the systems of exchanges that match buy and sell orders. Exchanges also compete via their services and fee structures; they differentiate themselves with the access fees they charge or the rebates they pay out for particular order types, as well as their data and connectivity options.¹¹⁵⁷ A subset of national securities exchanges, the five listing exchanges, also compete to attract stock listings by setting rules for listing standards for securities. The listing exchanges are also responsible for tracking certain regulatory information regarding their listed stocks.

Other trading venues, including 33 ATSS and 238 other FINRA members, including OTC market makers, also compete with exchanges and each other to attract order flow in NMS stocks and can route orders to the various trading venues. The order flow they attract depends on a number of factors such as fees and price improvement over the NBBO, services such as order display features, segmentation of subscriber order flow and the ability of subscribers to select which category of order flow to interact with, among other aspects of execution quality.

Pending the full implementation of the MDI Rules, the market for market data is serviced by the two exclusive SIPs and exchange proprietary feeds. The two exclusive SIPs collect trade, quote, and regulatory data from the 16 exchanges and three trade reporting facilities,¹¹⁵⁸ consolidate the data, determine an NBBO, and disseminate those data directly to users or through vendors and broker-dealers. The exclusive SIPs can also collect information from the alternative display facility (“ADF”) operated by FINRA, though no one currently uses the ADF to display quotes. Upon full implementation of the MDI Rules, the exclusive SIPs will be retired, and an unknown number of competing consolidators will take over the

collection, consolidation, estimation, and dissemination of these data.¹¹⁵⁹ The volume of data to be processed through these competing consolidators will be greater than that currently processed through exclusive SIPs, but competing consolidators will have flexibility to design data products tailored to different user types. In addition to the exclusive SIPs, the exchanges also disseminate market data to paying subscribers via proprietary data feeds. Some of these proprietary data feeds provide more data than the exclusive SIPs and are provided at a lower latency; however, the proprietary feeds are limited to individual exchanges while the SIPs contain consolidated data across all exchanges and also contain all off-exchange trades.¹¹⁶⁰ Following the transition to a competing consolidator model for market data, the Commission expects total fees for market data are likely to decline.¹¹⁶¹

Broker-dealers typically route their own orders or their customers’ orders for execution to trading venues. There were 3,494 registered broker-dealers as of Q2 2023.¹¹⁶² A portion of these broker-dealers focus their business on individual and/or institutional investors in the market for NMS stocks. According to CAT data, as of the end of 2022, there were approximately 1,006 registered broker-dealers that originated NMS stock orders on behalf of individual investors and approximately

837 broker-dealers that originated NMS stocks orders on behalf of institutional investors.¹¹⁶³ Institutional investor orders are typically “not held” orders, which provides the broker-dealer with more time and price discretion to execute the order or to minimize price impact.¹¹⁶⁴ In contrast, broker-dealers must attempt to execute a marketable held order immediately; these orders better suit retail investors because retail orders typically have much lower price impact, which reduces the need for discretion in order handling.¹¹⁶⁵ Brokers-dealers serving individual investors often distinguish themselves by the customer service and financial advice they provide and the accessibility and functionality of their trading platforms.

Many broker-dealers that handle customer accounts do not directly access national securities exchanges or ATSS for their orders. They use other broker-dealers to facilitate market access for them through those broker-dealers’ order entry systems. The Commission estimates that there are 1,161 broker-dealers with order entry systems that originate orders in NMS stocks in the minimum pricing increments; the amendments to Rule 612 may require changes to these order entry systems.¹¹⁶⁶ Of these broker-dealers, an estimated 270 broker-dealers operate smart order routers to facilitate order routing.¹¹⁶⁷

5. Amendments to Rule 605

Several commenters requested the Commission consider interactions between the economic effects of these proposed amendments and the proposed amendments to Rule 605.¹¹⁶⁸ The amendments to Rule 605 were not included as part of the baseline in the

¹¹⁵⁹ While the Commission is uncertain about the number of competing consolidators that will enter the market when exclusive the SIPs are retired, the Commission believes that the most likely outcome is three or more competing consolidators with at least one competing consolidator that is not affiliated with one of the exchanges currently operating the exclusive SIPs or an exchange that has sufficient proprietary data revenue that would create conflicting profit incentives. See MDI Adopting Release, *supra* note 10, at 18768–72 for further discussion on the number of competing consolidators that may enter the market.

¹¹⁶⁰ See *supra* note 862 and *infra* note 1780 and associated text for a further discussion on the nature of proprietary data feeds.

¹¹⁶¹ See MDI Adopting Release, *supra* note 10, at 18772–78.

¹¹⁶² Based on information from broker-dealers’ Q2 2023 FOCUS Report Form X-17A-5 Schedule I. This includes both carrying broker-dealers, who maintain custody of customer funds and securities, and introducing broker-dealers, who accept customer orders and introduce their customers to a carrying broker-dealer that will hold the customers’ securities and cash. In addition, the Commission acknowledges that the total number of broker-dealers is likely to increase as a result of the recent Dealer Adopting Release. The Dealer Adopting Release adopted new rules to further define the phrase “as a part of a regular business” as used in the statutory definitions of “dealer” and “government securities dealer.” The Dealer Adopting Release estimated that up to 43 entities may be required to register with the Commission as a dealer or government securities dealer, which would increase the total number of broker-dealers affected by the amendments.

¹¹⁶³ Customer accounts are identified in CAT as accounts belonging to either the “Institutional Customer” account type, defined as accounts that meet the definition in FINRA Rule 4512(c), or the “Individual Customer” account holder type, defined as accounts that do not meet the definition of FINRA Rule 4512(c) and are also not a proprietary account.

¹¹⁶⁴ See Securities Exchange Act Release No. 84528 (Nov. 2, 2018), 83 FR 58338 (Nov. 19, 2018) (adopting new order handling disclosure requirements) at nn.59–60 and corresponding text.

¹¹⁶⁵ FINRA’s best execution obligation requires that, “A member must make every effort to execute a marketable customer order that it receives fully and promptly.” See FINRA Rule 5310 (Best Execution and Interpositioning), Supplementary Material para. .01, available at <https://www.finra.org/rules-guidance/rulebooks/finra-rules/5310> (accessed Jun. 18, 2024).

¹¹⁶⁶ See *infra* note 1656.

¹¹⁶⁷ See *infra* note 1660.

¹¹⁶⁸ See, e.g., SIFMA Letter II; Virtu Letter II; Citadel Letter I; Equity Market Structure Citadel Letter; Citadel Letter II. See also Rule 605 Proposal, *supra* note 117.

finances<https://www.federalreserve.gov/publications/files/scf23.pdf>.

¹¹⁵⁷ Exchanges can also facilitate the routing of orders to other exchanges.

¹¹⁵⁸ Trade Reporting Facilities (TRFs) are facilities through which FINRA members report off-exchange transactions in NMS stocks, as defined in SEC Rule 600(b)(47) of Regulation NMS.

Proposing Release because they were not adopted at that time. The Commission amended Rule 605 on March 6, 2024,¹¹⁶⁹ and the requirements of that rule are part of the baseline considered here. With certain exceptions, the amendments to Rule 605 have a compliance date of Dec. 14, 2025,¹¹⁷⁰ which is after the compliance dates of the amendments made by this adopting release. The following discussion reflects the Commission's assessment of the anticipated economic effects of the amendments to Rule 605 described in the Rule 605 Amendments as they relate to the baseline for the adoption of these amendments. Specific interactions between the expected economic effects of the amendments to Rule 605 and those of rules adopted herein will be discussed in detail in a later section.¹¹⁷¹

Rule 605 requires disclosures for order executions in NMS stocks.¹¹⁷² The Rule 605 amendments modified reporting requirements in several ways. First, the amendments expanded the scope of reporting entities subject to the rule to include larger-broker-dealers¹¹⁷³ in addition to market centers.¹¹⁷⁴ The amendments also enhanced the accessibility of the reported execution quality statistics by requiring all reporting entities to make a summary report available.¹¹⁷⁵

The Rule 605 Amendments also included amendments to the information required to be reported under Rule 605, some of which are expected to be relevant to the amendments to this Rule. First, the amendments to Rule 605 added requirements related to the reporting of price improvement statistics relative to

the best available displayed price, which incorporates information about the best priced odd-lot orders, in addition to the preexisting requirement to report price improvement statistics relative to the NBBO.¹¹⁷⁶ The Rule 605 Amendments acknowledged that, while under the MDI Rules odd-lot information will include pricing information about odd-lots priced better than the NBBO,¹¹⁷⁷ the MDI Rules have been approved but not yet implemented, and thus this information is not yet available. Therefore, the Commission stated that Rule 605's price improvement statistics that are relative to the best available displayed price will not be required to be reported until six months after odd-lot order information needed to calculate the best available displayed price is made available pursuant to an effective national market system plan.¹¹⁷⁸

Second, the amendments to Rule 605 require the separate reporting of non-marketable limit orders that are priced at the midpoint of the NBBO or better ("midpoint-or-better NMLOs"), and additionally requires the reporting of information about the price improvement offered to these orders.¹¹⁷⁹ An analysis by the Commission in the Rule 605 Amendments indicates that a high percentage of midpoint-or-better

NMLO share volume is submitted with IOC designations as compared to other NMLOs, confirming that many of these orders are submitted by traders with the intention of executing immediately against hidden or odd-lot inside-the-quote liquidity, and that these orders tend to have different execution characteristics than other types of NMLOs.¹¹⁸⁰ Therefore, the Commission stated that market participants will benefit from an increase in transparency by the separate reporting of these orders, along with the required reporting of certain execution quality statistics that measure the cost of executing immediately, such as effective spreads.¹¹⁸¹

Third, the amendments to Rule 605 require the reporting of information regarding the extent to which orders received an execution at prices at or better than the quote for share quantities greater than the displayed size at the quote, *i.e.*, "size improvement." This information includes (1) a benchmark metric that measures the displayed size at the time of order receipt, which can then be compared to the number of submitted shares to determine the extent to which a trading venue handled orders that outsized available displayed depth,¹¹⁸² and (2) for orders that outsized available displayed depth, the number of shares that received size improvement.¹¹⁸³

The amendments to Rule 605 also modified the definition of order size categories from order size categories based on numbers of shares, with orders less than 100 shares excluded, to order size categories based on a notional dollar value range, along with an indication that the category reflects orders that were for an odd-lot, a round lot, or less than a share.¹¹⁸⁴ The Commission stated in the Rule 605 Amendments that one of the benefits of

¹¹⁷⁶ See 17 CFR 242.600(b)(14) (defining the "best available displayed price" as, with respect to an order to buy, the lower of: the national best offer at the time of order receipt or the price of the best odd-lot order to sell at the time of order receipt as disseminated pursuant to an effective transaction reporting plan or effective national market system plan; and, with respect to an order to sell, the higher of: the national best bid at the time of order receipt or the price of the best odd-lot order to buy at the time of order receipt as disseminated pursuant to an effective transaction reporting plan or effective national market system plan. With respect to a midpoint-or-better limit order, the best available displayed price shall be determined at the time such order becomes executable rather than the time of order receipt) and 17 CFR 242.605(a)(1)(ii)(M) through (Q).

¹¹⁷⁷ See MDI Adopting Release, *supra* note 10, at 18753.

¹¹⁷⁸ In the Rule 605 Amendments, the Commission acknowledged that it was still considering the proposed changes discussed in the Proposing Release and adopted herein, including accelerating the implementation of the round lot and odd-lot information definitions contained in the MDI Release and amending the definition of odd-lot information to include a new data element for the best available odd-lot orders available in the market. In the Rule 605 Amendments the Commission stated that, if it determined to adopt an amendment to the definition of odd-lot information to include a data element that identifies the best odd-lot orders available in the market, reporting entities would be required to use such information to determine the best available odd-lot price. See Rule 605 Amendments, *supra* note 10, at 26428 n.719.

¹¹⁷⁹ See 17 CFR 242.600(b)(57) (defining "midpoint-or-better orders") and 17 CFR 242.605(a)(1)(ii).

¹¹⁸⁰ See Rule 605 Amendments, *supra* note 10, at 26528.

¹¹⁸¹ See Rule 605 Amendments, *supra* note 10, at 26556–26557, 26568.

¹¹⁸² See 17 CFR 242.600(b)(72) (defining the "order size benchmark") and 17 CFR 242.605(a)(1)(ii)(R).

¹¹⁸³ See 17 CFR 242.605(a)(1)(ii)(S), requiring the reporting of "the sum of, for each execution of a covered order, the greater of: the total number of shares executed with price improvement plus the total number of shares executed at the quote minus the order size benchmark, or zero." The "total number of shares executed with price improvement plus the total number of shares executed at the quote minus the order size benchmark" ("net size improvement") will only be a strictly positive number for those orders that are both eligible to receive size improvement and actually receive size improvement, and thus is equivalent to a measure of shares that are eligible to and that received size improvement. See Rule 605 Amendments, *supra* note 10, at 26428 n.1544.

¹¹⁸⁴ See 17 CFR 242.600(b)(18).

¹¹⁶⁹ See Rule 605 Amendments, *supra* note 10.

¹¹⁷⁰ See *supra* note 1044. As an exception, after odd-lot order information sufficient to calculate best available displayed price is made available pursuant to an effective NMS plan, market centers, brokers and dealers will have six months to begin including price improvement statistics relative to best available displayed price in their Rule 605 reports. See Rule 605 Amendments, *supra* note 10, at 26497.

¹¹⁷¹ See *infra* section VII.E.6.a; see also *supra* section II.

¹¹⁷² 17 CFR 242.605.

¹¹⁷³ The term "larger broker-dealer" refers to a broker-dealer that meets or exceeds the "customer account threshold," as defined in Rule 605(a)(7) as broker-dealers that carry or introduce orders on behalf of 100,000 or more customer accounts through which transactions are affected for the purchase sale of NMS stocks. See Rule 605 Amendments, *supra* note 10, at 26428 n.61; 17 CFR 242.605(a)(7).

¹¹⁷⁴ Regulation NMS defines the term "market center" to mean any exchange market maker, OTC market maker, ATS, national securities exchange, or national securities association. See 17 CFR 242.600(b)(55).

¹¹⁷⁵ See Rule 605 Amendments, *supra* note 10, at 26428.

this change is to ensure that round lots for stocks with prices greater than \$250 are not excluded from Rule 605 reports following the change in round lot definition under the MDI Rules.¹¹⁸⁵

In the Rule 605 Amendments, the Commission stated that the amendments to Rule 605 will promote increased transparency of order execution quality, particularly for larger broker-dealers who were not required to disclose execution quality information under preexisting Rule 605, but also for market centers, whose execution quality information will be more relevant and easier to access because of improvements to existing Rule 605 disclosure requirements.¹¹⁸⁶ The Commission stated in the Rule 605 Amendments that this increase in transparency is expected to increase the extent to which market centers and broker-dealers compete on the basis of execution quality, as well as improvements in execution quality.¹¹⁸⁷ The Commission also stated that the amendments to Rule 605 will result in initial and ongoing compliance costs, the majority of which will be related to expanding the scope of reporting entities to include larger broker-dealers, but a significant portion of which will result from the need for market centers to update their systems to process and store the data necessary to prepare the amended reports.¹¹⁸⁸

D. Benefits, Costs, and Other Economic Effects

The Commission expects the adopted minimum quoting increment will alleviate tick constraints and better allow prices to be determined by the forces of supply and demand, lowering transaction costs for investors. A lower access fee cap will further reduce the transaction costs of liquidity demanders in the predominant maker-taker structure. Making fees and rebates determinable at the time of trade may enhance broker-dealer order routing by helping mitigate a potential conflict of interest and providing clarity in terms of all in execution costs. Accelerating the inclusion of odd-lot information into the exclusive SIPs, accelerating the implementation of the round lot definitions, and amending the definition of odd-lot information to include the best odd-lot order, will accelerate some of the benefits of the MDI Rules, and

could also lead to better order execution by enhancing benchmarking. The amendments will also impose compliance costs on various market participants.

The Commission continually monitors the national market system and the operation of Federal securities laws. As discussed above, the national market system continually changes and the Commission, consistent with its oversight of the national market system, will monitor the impact of the adopted rules. With regard to the amendments adopted herein, by May 2029 (three years from the last implementation date), Commission staff will review and study the effects of the amendments in the national market system. Such a review and study might include, but would not be limited to, an investigation of: (i) general market quality and trading activity in reaction to the implementation of the variable tick size, (ii) the reaction of quoted spreads to the implementation of the amended access fee cap, and (iii) changes to where market participants direct order flow, *e.g.*, to exchange versus off-exchange venues, following the implementation of the amendments.

In studying the effect on market quality, a number of different metrics could be examined including quoted, realized, and effective spreads; cumulative depth from the midpoint across multiple price levels; and the cost of a round-trip trade for various trade sizes.¹¹⁸⁹ In such analysis, improvements in market quality for stocks affected by Rule 612 would correspond to reduced spreads (adjusting for fees or rebates) or a reduced cost of a round-trip trade.¹¹⁹⁰ To isolate the effect of Rule 610, the analysis might focus on those stocks not directly affected by Rule 612. Such analysis might focus on the effect of Rule 610 on quoted spreads (*e.g.*, to examine how the quoted spread adjusts in response to changes in fees and rebates), on whether Rule 610 leads to any change in effective spread off-exchange (due to adjustments to on-exchange quotes), and on any migration of liquidity off-exchange.

1. Modification of Rule 612 To Create a Half-Penny Tick

The Commission is adopting amendments to Rule 612 that introduce

one minimum pricing increment that is less than \$0.01, *i.e.*, \$0.005, for quotes and orders priced \$1.00 or more for NMS stocks that have a TWAQS of \$0.015 or less during the evaluation period.¹¹⁹¹ Hence, the amendments to Rule 612 will create a smaller tick size for some NMS stocks.

The Commission expects that, on average, market quality will improve for the stocks receiving the smaller tick size. A smaller tick has two competing effects on market quality. First, a smaller tick leads to pricing that more effectively balances liquidity supply and demand, limiting distortions, and thus lowering transaction costs. Second, a smaller tick fragments liquidity in the order book into more price levels, which can increase complexity associated with implementing trades, and increases the incidence of pennyning¹¹⁹²—effects that can harm liquidity. A smaller tick can also increase message traffic which can be costly for market participants. The amendments will not change the tick for NMS stocks priced below \$1.00, nor for stocks with time weighted average quoted spread always greater than \$0.015 during an Evaluation Period and thus the tick size amendments are expected to have minimal if any effect on the trading environment for these stocks.

a. Estimates of Percent of Trading Volume and Number of NMS Stocks Affected

As discussed in section VII.C.1, prior to these amendments, the tick size for orders in NMS stocks priced equal to or greater than \$1.00 was \$0.01, and the tick size for orders in NMS stocks priced less than \$1.00 was and remains \$0.0001.¹¹⁹³ The amendments assign each NMS stock to one of two tick sizes: \$0.005 or \$0.01, depending on the stock's time weighted average quoted spread during an Evaluation Period (specifically, assigning \$0.005 for stocks with a TWAQS of \$0.015 or less).¹¹⁹⁴ Table 7 presents estimates of the amount of share and dollar trading volume that would have been associated with the two tick sizes, as well as the sub \$1.00 tick size, based on 2023 trading volumes. It also presents estimates based on the Proposal which would have reduced tick sizes for stocks with TWAQS of \$0.040 or less.

¹¹⁸⁵ See Rule 605 Amendments, *supra* note 10, at 26523.

¹¹⁸⁶ *Id.* at 26543.

¹¹⁸⁷ See Rule 605 Amendments, *supra* note 10, at 26543–26544.

¹¹⁸⁸ *Id.* at 26579–26580.

¹¹⁸⁹ Compare table 8.

¹¹⁹⁰ One possible study design could focus on stocks close to the TWAQS threshold. Comparing stocks with similar levels of liquidity *ex ante* would better isolate the effect of the smaller tick size on market quality.

¹¹⁹¹ See *infra* section III.C.

¹¹⁹² See *supra* section I.A.1 and note 994 for the definition and discussion of pennyning.

¹¹⁹³ See *supra* section VII.C.1.a.

¹¹⁹⁴ See *supra* section III.C for further discussion.

TABLE 7—ESTIMATED NUMBER OF STOCKS AND TRADING VOLUME IN EACH TICK SIZE GROUP ^a

Average quoted spread	Tick	Number of stocks	Estimated % share volume	Estimated % dollar volume
All Stocks				
Spread <= \$0.015	\$0.005	1,788	66.2	42.9
\$0.015 < Spread	\$0.01	9,047	33.8	57.1
Spread <= \$0.04	(Proposed Reduction to \$0.005 or smaller) ...	4,333	84.8	66.5
Price < \$1				
.....	\$0.0001	1,106	12.3	0.1

^a In this table, quoted spreads, and thus tick sizes, are determined by computing the time weighted quoted spread during regular trading hours as computed by the WRDS intra-day indicators for every sym_root and sym_suffix combination in the WRDS intra-day indicators dataset and taking the equal weighted average across all trading days in January–March 2023. Stocks with average quoted spreads less than \$0.015 are assigned a \$0.005 tick. All other stocks are assigned a \$0.01 tick. A stock with a price less than \$1.00 will still be assigned a tick size per the usual process, which would be in force should the stock's price rise above \$1.00. As long as the stock's price remains below \$1.00 the \$0.0001 tick size would prevail. The designated tick size is applied to trading volume in May–October 2023 where share and dollar volume is obtained from the universe of stocks in WRDS intra-day indicators. New stocks are given a tick size of \$0.01. The number of stocks assigned to each group is indicated in the *Number of Stocks* column and indicates the average number of stocks in each category (listings and de-listings can affect the daily number of stocks trading as well as if a stock's price falls below \$1). If a stock has a VWAP of less than \$1.00, then that stock, as well as all of its trading volume for that day, is assigned to the \$0.0001 tick size.

This estimate may be an upper bound. As discussed in section VII.B.3, *supra* and *infra* section VII.D.2, rebates can lower the quoted spread (although not necessarily transaction costs). Thus, lowering the access fee, and thus the associated rebates, may lead to wider quoted spreads. Because of this, some stocks may have quoted spreads that meet the threshold for the smaller tick size in the current environment but may not meet that threshold once the access fee cap is reduced, leading to lower rebates offered. Additionally, all stocks, even those priced below \$1.00, will be assigned a tick size via the usual process. If a stock price falls below \$1.00 the applicable tick size will be \$0.0001. So not all stocks initially assigned the \$0.005 tick size will trade differently than the baseline. This table differs from table 3 because table 3 is based on daily average TWAQs and does not attempt to analyze the effect of the adopted amendments.

Once implemented, the changes to the current arrangements for consolidated market data pursuant to the MDI Rules may impact the number of stocks and their estimated percentage volumes anticipated for each tick level. In particular, under the MDI Rules, NMS stocks priced \$250 or more will receive reductions in round lot sizes which is anticipated to lower their quoted spreads; however, the effect on the reported numbers is likely small both because these stocks make up less than 4% of share volume and because they are unlikely to have quoted spreads less than \$0.015. Based on an analysis of data from May–October 2023, the average quoted spread of a stock priced between \$250 and \$1,000 was \$0.71, far greater from the \$0.015 that will trigger a smaller minimum increment. Similarly, for stocks priced between \$1,000 and \$10,000 the average quoted spread was \$3.85 and the only stock that had a value weighted average price greater than \$10,000 already has a round lot size of one share and had an average quoted spread of \$0.07.

Table 7 indicates that, had the amendments been in place in 2023, approximately 66% of share volume and 43% of dollar volume, associated with an estimated 1,788 individual stocks, would likely have been assigned the \$0.005 tick size. The adopted Rules represent a significant reduction in the scope of the Rule compared to the proposal. Table 7 provides estimates of the number of stocks and volume that would have been affected if the Commission had implemented the Rule with the tick size thresholds as proposed (the proposal would have lowered the tick size for all stocks with TWAQs less than \$0.04). The Commission estimates that there would have been 4,333 stocks receiving a smaller tick accounting for 84.8% (66.5%) of share (dollar) volume if all stocks with a TWAQs less than or equal to \$0.04 received a smaller tick size. Consequently, the number of stocks receiving a lower tick size is more than halved under the adopted amendments.

b. Effects on Market Quality

For the stocks that will receive the \$0.005 tick, the Commission expects market quality to improve. Smaller tick sizes present a market quality tradeoff between increasing penny and

complexity concerns—which can harm market quality—and reducing pricing constraints—which can improve market quality by reducing pricing distortions leading to an oversupply of liquidity relative to competitive levels. The Commission believes that market quality will, on average, improve for stocks receiving the smaller tick based on theoretical discussion, the Commission's empirical analysis, as well as evidence and opinions expressed by commenters. For example, one commenter agreed with the presence of market distortions under current tick sizes, stating: “[t]he SEC correctly describes the problem of tick-constrained securities. Such securities are ‘not able to be priced by market forces’ because the current ‘rule 612 minimum pricing increment of \$0.01 may now be too large for certain stocks, which, in turn, results in the pricing of such stocks being artificially constrained.’ Trading in these securities would be improved ‘if competitive market forces could establish prices in sub-penny increments, which could reduce quoted spreads,’ allowing these

securities to ‘be priced more aggressively within the spread.’ ” ¹¹⁹⁵

The theoretical discussion provided below supports characterizing a smaller tick size as providing a penny/complexity versus pricing constraint tradeoff, and the empirical analysis presented in table 8 as well as other empirical research suggests that, for stocks with fewer than approximately two ticks intra-spread, ¹¹⁹⁶ a reduction in the tick size on average improves market quality. A number of commenters agreed, and some commenters presented analyses suggesting that 2 to 4 ticks intra-spread may be optimal. Combined, this evidence suggests that the tick size reduction associated with these amendments will, on average, improve

¹¹⁹⁵ See Nasdaq Letter I at 11 (quoting the Proposing Release).

¹¹⁹⁶ We use the terminology “ticks intra-spread” or “ticks within the spread” to mean the number of quoting increments between the NBB and NBO (the quoted spread). For example, if the quoted spread is one penny wide (in a stock priced above \$1), then we say that there is one tick intra-spread under the baseline. Under the baseline, symbols priced above \$1.00 with a quoted spread between 2 and 4 pennies would have 2 to 4 ticks intra-spread.

market quality for the subset of stocks receiving the lower tick size.¹¹⁹⁷

i. Theoretical Discussion

Tick sizes present an economic tradeoff.¹¹⁹⁸ All else equal, reducing the tick size improves market quality by reducing distortions associated with markets not being able to set prices that equate liquidity supply and demand in the presence of a discrete pricing grid.¹¹⁹⁹ In a competitive market, and in the absence of rebates or other price distortions, the prevailing bid or ask price will be the feasible price equal to or just worse than the price that equates supply and demand for the underlying asset.¹²⁰⁰ This is because liquidity providers will not post bids and offers that would result in guaranteed trading losses—*i.e.*, they will not post prices that do not bring in sufficient revenue to cover their marginal cost of providing liquidity.¹²⁰¹ Since there is competition along a finite pricing grid, they choose the closest feasible price just worse than the competitive one. The gap between the feasible price and the price that equates liquidity supply and demand—*i.e.*, the competitive price—is a price distortion allowing liquidity providers to earn rents on liquidity provision.

This pricing distortion is most relevant for stocks that are tick-constrained and diminishes as quoted spreads widen. To understand this, consider again the example of section VII.B.2. In that example, under a tick size of \$0.005, the ask would be \$10.015 and the bid \$10.005. However, with a tick size of \$0.01, the ask would be \$10.02 and the bid \$10.00, implying a spread that is twice as wide. Now assume that the same issuer reduced the number of shares so that the stock increases in price 100-fold, but the underlying economics are the same. To

achieve the same reduction in spread would not require any change to the tick size: an ask of \$1,001.50 and a bid of \$1,000.50 are feasible even with a tick size of one penny.

While a smaller tick size increases competition, thereby reducing distortions and reducing transaction costs, there are potential costs raised in the proposing release and also by commenters which are discussed below.

Pennyning: The proposing release and commenters identified pennyning as a risk of a smaller tick which can harm market quality.¹²⁰² Pennyning occurs when limit order providers get to the front of the queue by providing economically trivial price improvement. It reduces the importance of time priority.¹²⁰³ The risk of being pennied could discourage liquidity provision in lit markets, particularly by market participants that are slower to respond to changes in market conditions and could increase transaction costs for these investors.¹²⁰⁴ To compensate for additional costs associated with a fragmented order book, liquidity providers may post less aggressive quotes leading to wider quoted spreads and worse market quality.¹²⁰⁵

Market participants may respond to an increased risk of pennyning by increasing their use of hidden or off-exchange orders that do not display prices, and thus avoid exposing the price needed to beat in order to get to the front of the queue and increase the likelihood of a fill.¹²⁰⁶ Increased use of hidden orders has been associated with worse market quality outcomes.¹²⁰⁷ Some commenters expressed their belief that a narrower tick and increased

pennyning could lead some orders that previously were at protected prices to be traded through.¹²⁰⁸ However, it is not clear from the commenters' letters why this would occur given the order protection rule and broker's best execution responsibilities. One commenter also suggested that narrow ticks could increase volatility.¹²⁰⁹ However, existing research on the topic would suggest, if anything, an opposite effect.¹²¹⁰

In contrast to the tick size pricing distortion discussed above, which is most relevant for stocks that are tick-constrained,¹²¹¹ the pennyning effect will be most pronounced for stocks with wide quoted spreads because there are more intra-spread price levels and the cost of gaining priority over other liquidity providers, by updating the best price by a single tick, is lower with a smaller tick.¹²¹² For example, a stock with a quoted spread of ten cents, and a \$0.01 tick, will have 10 price levels within the quoted spread, whereas a stock with a \$1.00 quoted spread and a \$0.01 tick will have 100. Because price has first priority in order execution, in a price-time priority system where quote priority is awarded based on best price first and then arrival order second, a primary way to gain priority for a trader providing liquidity is to price-improve over existing orders. Without a small tick size relative to the quoted spread, getting to the front of the queue via price improvement will be more costly, requiring larger relative price concessions.¹²¹³ Because the (beneficial) pricing efficiency effect is greatest when quoted spreads are narrow, whereas the (detrimental) pennyning effect is greatest when quoted spreads are wide, this

¹¹⁹⁷ The amendments will take stocks trading with 1–1.5 ticks intra-spread and increase the number of ticks intra-spread to up to 3.

¹¹⁹⁸ See section VII.B.2

¹¹⁹⁹ See, e.g., Rindi and Graziani Letter at 2 (agreeing), see also Barardehi et al., *supra* note 231 (for a more thorough discussion of this tradeoff). See also NASAA Letter at 9 (stating that the general concept that a narrower tick size will increase pricing efficiency), as well as discussion in Ingrid M. Werner, et al., *Tick Size, Trading Strategies and Market Quality*, 69 *Mgmt. Sci.* 3818 (2023). See also Budish Letter at 4 referring to a tick size that is too wide as producing rents via regulatory price constraints.

¹²⁰⁰ Any price better than this will lead to an excess of liquidity demand which will push prices out again.

¹²⁰¹ Marginal cost in this context refers to the cost of providing an additional share of liquidity. If the revenue associated with providing a share of liquidity is less than the cost of providing that share, then liquidity providers are better off not providing liquidity than incurring a loss to provide liquidity.

¹²⁰² See, e.g., Robinhood Letter at 41, Virtu Letter II at 4, Tastytrade Letter at 20, AIMA Letter at 2, Brandes Letter at 2, UBS Letter at 10, and TradeStation Letter at 5, Lewis Letter attached to Virtu Letter II at p 33. See also *supra* note 994 and section VII.B.2 for a definition and discussion of pennyning. See also Proposing Release, *supra* note 11 at section V.D.1.

¹²⁰³ See, e.g., Antitrust Division of the DOJ Letter at 5 and XTX Markets Letter at 3.

¹²⁰⁴ See Dyhrberg et al., *supra* note 994 studying the effects of imposing a tick size on a crypto exchange that previously did not have a tick size. The authors report an improvement in market quality due largely to a reduction in pennyning behavior. See also Virtu Letter II at 25 and Better Markets Letter I at 8. See also Budish Letter at 5.

¹²⁰⁵ See, e.g., Virtu Letter II at 8, Fidelity Letter at 10.

¹²⁰⁶ See, e.g., IEX Letter I at 12, Danny Mulson Letter at 1, Nasdaq Letter I at 2.

¹²⁰⁷ See, e.g., Amy K. Edwards, et al., *The Effect of Hidden Liquidity: Evidence from an Exogenous Shock* (working paper Mar. 1, 2021), available at <https://ssrn.com/abstract=3766512> (retrieved from SSRN Elsevier database) ("Edwards, et al. (2021)"). See also Danny Mulson Letter at 3 stating that a smaller tick size would lead to more hidden orders, specifically "peg offset dark orders" which could harm price efficiency.

¹²⁰⁸ See Themis Letter at 5, Virtu Letter II at 6, 10 discussing how a smaller tick can weaken protected quotes.

¹²⁰⁹ See, e.g., Virtu Letter II at 8. See, also Edwin Hu et al., 2018; *supra* note 1002; and Kee H. Chung et al., *Tick Size Liquidity for Small and Large Orders and Price Informativeness: Evidence From the Tick Size Pilot Program*, 136 *J. Fin. Econ.* 879 (2020), who both report the opposite effect in the context of the Tick Size Pilot where stocks with wider ticks experienced more volatility.

¹²¹⁰ See *id.* see also e.g., Edwards, et al., (2021), *supra* note 1207.

¹²¹¹ See *supra* this section.

¹²¹² The pennyning effect would be particularly acute for wide-quoted spread stocks with lower stock prices because a lower stock price reduces the amount of capital needed to supply a round-lot quote and hence make pennyning less capital intensive.

¹²¹³ For example, if a stock has a quoted spread of ten cents and a \$0.01 tick, gaining priority through price improvement would require narrowing the half-quoted spread (*i.e.*, the distance between the current quote and the midpoint) by 20%. If instead a stock has a quoted spread of \$1.00 with a \$0.01 tick, a market participant would only need to improve the half-quoted spread by 2% to get to the front of the queue.

analysis suggests setting a minimum quoting increment on the basis of average spread. Commenters agreed.¹²¹⁴

Fragmenting liquidity: The proposing release and commenters also discussed a cost of a lower tick size as spreading the displayed orders over more price levels.¹²¹⁵ When tick increments are farther apart, all else equal, liquidity providers that may have various prices at which they are willing to provide liquidity must congregate their quotes at only the available quoting increments. Thus, there will be more depth at each level including at the NBBO. With more price levels due to a smaller tick size, market participants can more accurately tailor their quotes to the prices at which they are willing to provide liquidity and thus liquidity will naturally spread over more levels and there will be fewer resting orders at each price level, including the NBBO.¹²¹⁶

Fragmenting liquidity across multiple price levels may decrease costs associated with smaller orders, which would be able to source liquidity at improved prices due to a finer price grid.¹²¹⁷ However, it can increase the complexity and cost associated with sourcing liquidity for larger orders,¹²¹⁸ as the reduction in shares available at the top of the book will render it more likely that a market participant must source liquidity beyond the NBBO in order to execute a trade.¹²¹⁹ It could also increase the number of child orders a parent order needs to be divided into to execute, which could increase the overall complexity and likelihood of information leakage leading to increased

transaction costs via increased price impact.¹²²⁰

Quote Instability: Commenters also stated that less depth at the NBBO can lead to increased NBBO quote instability as trades are more likely to deplete depth at the NBBO prices.¹²²¹ One commenter presented evidence that lower quote stability is empirically associated with increased market making costs, which it states may deter liquidity provision.¹²²² While increased quote instability may occur in stocks receiving the lower tick, the lower tick itself will allow market forces to adjust the price of liquidity—*i.e.*, the quoted spread—such that market makers are competitively compensated for the risks associated with providing liquidity. Increased instability in the NBBO could make it more difficult to determine which exchange has the best price at a given point in time and thus where to route an order.¹²²³ This could be particularly true when markets are volatile.¹²²⁴

Increasing (or decreasing) rents to speed: The Proposing Release stated that “too small ticks may inefficiently award speed”.¹²²⁵ As discussed in the next few paragraphs, commenters also commented on the effects of tick size on speed. Investments in speed are a fixed and largely irreversible cost that some market participants choose to incur. Changing the tick size could change the profitability of such investments, that is, they could increase or decrease the rents

to speed. As noted in section VIII.B.2, a narrower tick reduces rents that accrue when a liquidity provider can be first in line in a queue.¹²²⁶ That is, narrowing the tick would be expected to reduce rents to speed. However, speed confers an advantage in implementing a penny strategy: a trader can not only step ahead of another trader, but also potentially sell (or buy) an asset back to the other trader if the market moves unfavorably, replicating an option-like payoff.¹²²⁷ The amendments are limited to stocks with spreads for which penny is unlikely to be a dominant effect. Nonetheless, to the extent that penny increases, it has the potential to increase the rents to speed.

In the context of the proposal, one commenter stated that a smaller tick size would be expected to increase the frequency of sniping because smaller ticks generate faster and more frequent price changes.¹²²⁸ While there will be more prices at which to trade, the underlying information is not changing (prices may change more rapidly, but the information of each price change is smaller). That is, sniping may become more frequent, but the profits per each individual snipe attempt would decline. However, and as stated above, the Commission does agree that a large number of ticks within the spread can make penny more prevalent, and to the extent that profits are linked to speed, can increase the rents to speed. The adopted amendments imply fewer ticks intra-spread than the proposing amendments, reducing this effect. Thus, the Commission does not expect slower traders to be disadvantaged by the adopted amendments.

Effect on thinly traded securities: One commenter stated that narrower quoted spreads due to a smaller tick would be harmful for liquidity, particularly for smaller and medium-sized companies and for thinly-traded securities.¹²²⁹ This is because narrower quoted spreads would discourage some liquidity providers from entering the market. The Commission disagrees with this

¹²¹⁴ See Budish Letter at 4 and Harris Letter at 7 supporting the use of quoted spread as the determinate of the tick size. See also *infra* section VII.D.1.b.iii.

¹²¹⁵ See Proposing Release, *supra* note 11 at section V.D.1 for a discussion of fragmenting liquidity. See also *e.g.*, GTS Letter at 5 and CCMR Letter at 24.

¹²¹⁶ See, *e.g.*, GTS Letter at 5, CCMR Letter at 24, and UBS Letter at 11.

¹²¹⁷ See UBS Letter at 11.

¹²¹⁸ *Id.* See also TradeStation Letter at 6 mentioning as an example of increased complexity that brokers would have to put systems in place to manage customers' good-till-canceled trades that may remain open over a weekend when a tick size change is implemented. See also discussion in Lewis Letter attached to Virtu Letter II at 34–35.

¹²¹⁹ See, *e.g.*, IEX Letter I at 13 discussing how order shredding with smaller ticks can increase information leakage, such as when quotes on other exchanges are cancelled when limit orders on one exchange begin to be executed, potentially signaling a large price moving trade. Brandes Letter at 2 states that increased complexity associated with more pricing increments would be to the detriment of longer-term investors. Equity Market Structure Citadel Letter at 2 states that for institutional investors, “[l]arger orders will be more complex to execute, as filling the entire order will require accessing multiple price levels, which can increase price impact.”

¹²²⁰ See, *e.g.*, Citadel Letter I at 5, 9 and Virtu Letter II at 8, 10 discussing the price impact of large trades under a regime of smaller ticks; stating that smaller ticks could increase price impact.

¹²²¹ Some commenters stated that smaller ticks would lead to more “flickering quotes,” which are defined in the Reg NMS release as quotes that flashed for a short period of time solely to earn market data revenues, but were not truly accessible and therefore did not add any value to the consolidated quote stream. However, the Commission believes that this is unlikely for reasons discussed in the Proposing Release note 195 and surrounding text relating to advances in exchange technology. Other commenters defined “flickering quotes” more broadly simply as periods of time where the NBBO changes rapidly, see, *e.g.*, IEX Letter I at 8 and Robinhood Letter at 20. Much of the concern these commenters expressed was with respect to the proposed \$0.001 and \$0.002 tick sizes which are not part of the adopted amendments, see IEX Letter I at 8 and Robinhood Letter at 20. As discussed here, the Commission acknowledges that a smaller tick will likely lead to more frequent changes to the NBBO and discusses those consequences herein.

¹²²² See IEX Letter I at 11–12.

¹²²³ See, *e.g.*, Themis Letter at 6 and CCMR Letter at 17 and MFA Letter at 1. Quote instability could increase the complexity associated with complying with Rule 611 as it could make it harder to determine which exchange currently has the best price.

¹²²⁴ See Citadel Letter I at 2, 7.

¹²²⁵ See Proposing Release, *supra* note 11, at 80306.

¹²²⁶ See, *e.g.*, Budish Letter at 1 (“Reducing the tick-size constraint for tick-constrained stocks will reduce excess rents from artificially constrained prices. These excess rents lead to a speed race to the top of the book, which increases complexity, and the rents come at the expense of investors via a higher cost of liquidity.”), Antitrust Division of the DOJ Letter at 5, and XTX Markets Letter at 3.

¹²²⁷ See *supra* note 993 for a discussion on the relationship between penny and trading speed. See *supra* note 1202 and accompanying text for discussions regarding the amendments to Rule 612 and penny.

¹²²⁸ See Virtu Letter II at 23. Sniping pertains to the ability to “pick off”, by executing against a stale quote in response to new information before it can be updated.

¹²²⁹ See STA Letter at 5.

characterization. The academic research on the Tick Size Pilot (TSP), which increased the tick size for some smaller stocks from \$0.01 to \$0.05 between 2016 and 2018, suggests that for many stocks affected by the TSP, particularly those with narrower quoted spreads, the TSP led to worse market quality.¹²³⁰

Additionally, lowering excess rents and the oversupply of liquidity caused by tick size induced pricing distortions is likely to reduce aggregate depth across all price levels. However, this reduction is unlikely to be harmful to overall market quality, even for smaller or thinly traded securities, as it would relieve a distortion resulting in an oversupply of liquidity. As the amount of liquidity provision comes closer to equilibrium levels, quoted spreads narrow and queue lengths shorten, lowering transaction costs and increasing the likelihood that relatively slower fundamental and/or retail traders could interact with each other. This will reduce total transaction costs for these traders because one side would be earning the quoted spread on the transaction.¹²³¹

ii. Empirical Analysis

This section presents the Commission's empirical analysis, as well as a discussion of commenter analysis and views concerning the effect of a tick size reduction on various aspects of market quality. Based on these analyses, the Commission concludes that on average, stocks that receive the smaller \$0.005 tick size will experience improved market quality—implying that, for these affected stocks, the predominant market quality effect of the smaller tick size will be an increase in pricing efficiency.¹²³²

The academic literature examining the effect of tick sizes on financial markets largely studies two events: decimalization, which occurred in 2001¹²³³ and reduced the tick from $\frac{1}{16}$ th of a dollar (\$0.0625) to \$0.01; and the TSP, which ran from October 2016 to October 2018 and temporarily

increased the minimum tick increment from \$0.01 to \$0.05 for a sample of small cap stocks.¹²³⁴ Most of the literature surrounding decimalization suggests that, on average, decimalization was associated with a decline in quoted spreads consistent with the notion that lowering the tick size relieved distortions related to having a tick size that is too wide.¹²³⁵

In the Proposing Release, the Commission supplemented existing research with its own analysis on the TSP.¹²³⁶ As stated in the Proposing Release, market dynamics have changed dramatically in the more than two decades since decimalization. Most notably over that period, electronic, algorithmic, and high-frequency trading have come to dominate the trading landscape, whereas they were much less prominent in 2001. These changes diminish the relevance of evidence from these prior periods, making it desirable to supplement existing studies with evidence that is closer in time.

Some commenters questioned using the TSP to estimate the effects of a reduced minimum pricing impact because the TSP affected only a subset of small cap stocks, did not contain ETPs, and did not affect access fee caps.¹²³⁸ One of those commenters suggested that the TSP analysis was not applicable because it focused on stocks with quoted spreads much wider than the few cent quoted spreads contemplated by the amendments.¹²³⁹ The same commenter suggested that the TSP was not applicable because it applied to a 5 to 1 tick size change, which is different from the tick size change in the amendments.¹²⁴⁰ Some commenters went further and questioned whether anything could be

learned from the TSP because it did not involve sub-penny tick sizes.¹²⁴¹

As explained in the following discussion, the Commission continues to believe that the TSP provides a meaningful environment to study the potential effects of a tick size change for the reasons articulated below, even as the TSP has limitations for determining the exact effect of the amendments to Rule 612.

First, the economics of being tick-constrained do not depend on the absolute size of the tick in question. Rather, they depend on the relationship between the economic spread¹²⁴² implied by the economics of the stock and the quoted spread that is possible given the tick size, regardless of the specific tick size. Specifically, when the economic spread is narrower than a single tick, the negative effects of being tick-constrained are expected to emerge for the reasons discussed in section VII.D.1.b.i above.¹²⁴³ Those reasons are independent of the absolute size of the tick. They instead depend on the ratio of the market price of liquidity to the tick, *i.e.*, the lowest quoted spread permitted by the tick size. In this context, the TSP analysis has merit, even as it includes some stocks with quoted spreads wider than 1.5 cents (the cutoff for the amendments), because its purpose is to gain insight into how stocks with various numbers of tick increments intra-spread react to changing the tick. Addressing this question necessitates considering stocks with wider quoted spreads.

Second, as discussed above, a key factor in the economics of being tick constrained is the implied quoted spread relative to the tick size, not the market capitalization or any other the qualifying factors for the TSP. Because the economics of being tick-constrained do not depend on market capitalization, the findings derived from the TSP can be usefully applied to a broader section of the market. Also, one study,¹²⁴⁴ referenced in the Proposing Release, specifically examined only the most

¹²³⁰ See *infra* section VII.D.1.b.ii and Barardehi et al., *supra* note 231 for additional discussion of the tick size literature.

¹²³¹ See Retirement Coalition Letter at 2, Pragma Letter at 10.

¹²³² See *supra* note 1199 and surrounding text for additional discussion of the tick size tradeoff.

¹²³³ See, e.g., Order Directing the Exchanges and the National Association of Securities Dealers, Inc. to Submit a Phase-in Plan to Implement Decimal Pricing in Equity Securities and Options; Pursuant to Section 11A(a)(3)(B) of the Securities Exchange Act of 1934, Securities Exchange Act Release No. 42914 (June 8, 2000), 65 FR 38010 (June 19, 2000); Commission Notice: Decimals Implementation Plan for the Equities and Options Markets, SEC (July 24, 2000), available at <https://www.sec.gov/rules/other/decimalp.htm>.

¹²³⁴ See Edwin Hu, et al. (2018), *supra* note 1002, for additional details about the Tick Size Pilot.

¹²³⁵ See Hendrick Bessembinder, *Trade Execution Costs and Market Quality After Decimalization*, 38 J. Fin. & Quantitative Analysis 747 (2003). See also Michael A. Goldstein & Kenneth A. Kavajecz, *Eighths, Sixteenths and Market Depth: Changes in Tick Size and Liquidity Provision on the NYSE*, 56 J. Fin. Econ. 125 (2000) and Charles M. Jones & Marc L. Lipson, *Sixteenths: Direct Evidence on Institutional Execution Costs*, 59 J. Fin. Econ. 253 (2001), both examining the earlier tick size change from $\frac{1}{8}$ to $\frac{1}{16}$ of a dollar. See also Sugato Chakravarty, Venkatesh Panchapagesan & Robert A. Wood, *Did Decimalization Hurt Institutional Investors?*, 8 J. Fin. Mkts. 400 (Nov. 2005) and Sugato Chakravarty, Bonnie F. Van Ness, & Robert A. Van Ness, *The Effect of Decimalization on Trade Size and Adverse Selection Costs*, 32 J. Bus. Fin. & Acc. 1063 (June/July 2005), both suggesting that large institutional trades may have become more costly following decimalization.

¹²³⁶ See Proposing Release, *supra* note 11, at 80318–80322.

¹²³⁸ See, e.g., CCMR Letter at 27, Virtu Letter II at 64, Lewis Letter attached to Virtu Letter II at 34.

¹²³⁹ See CCMR Letter at 27.

¹²⁴⁰ *Id.*

¹²⁴¹ See Citadel Letter I at 12 (stating that the TSP “provides no information on what would be expected to occur if minimum quoting increments were further reduced to levels that have never before been tested”); and Virtu Letter II at 3 (“The TSP studied the impact of a widened minimum quoting and trading increment for certain small capitalization stocks, and offered no analysis, data, or conclusions on the potential impact that a narrowed, sub-penny tick regime would have on the marketplace, the investor experience, or issuers. It is an apples-to-oranges comparison and is irrelevant as a basis for support”).

¹²⁴² See *supra* note 990 and surrounding text for discussion of the term economic spread *id.*

¹²⁴³ See also *id.* for a discussion of the concept of economic spread.

¹²⁴⁴ See Barardehi et al., *supra* note 231.

liquid TSP stocks and removed stocks with very low prices.¹²⁴⁵ The authors' results indicate that, in this subset of the most liquid TSP stocks, all key findings of the TSP not only hold, but that the patterns of the results of the TSP on market outcomes tend to strengthen.

Third, while the Commission acknowledges the difference between the TSP and the amendments with regard to tick size splits—the TSP was a 1:5 tick size change while the amendments provide a 1:2 tick size change for some stocks—the TSP provides meaningful information about the likely direction of the effects due to a tick size change: that is, whether market quality improves or declines when the tick size is changed. The actual effect of a 1:2 split may differ from that observed from the TSP's 1:5 split, but it is unlikely to go in the opposite direction if the TSP were to indicate a market quality improvement when the tick size is reduced. This is because the potential negative effects of too many ticks intra-spread would be stronger for the 1:5 split associated with the TSP than with the 1:2 split associated with the amendments.¹²⁴⁶ Thus, it is unlikely that, were the TSP to show an improvement in market quality associated with a 1:5 tick size split for certain stocks, that there would have been an opposite effect with a 1:2 tick size split.

Some commenters stated that reducing the tick size below \$0.01 was opposed to the conclusions and analysis provided by the Commission when adopting Rule 612 in 2005, and that the Commission did not provide analysis explaining why it was reversing its opinion.¹²⁴⁷ The Commission disagrees that the analysis and conclusions associated with the initial proposal and adoption of Rule 612 are inconsistent with the analysis provided in the Proposing Release and repeated here. When initially proposing and adopting Rule 612, the Commission acknowledged that lowering the tick size from fractions to \$0.01 improved

the trading environment.¹²⁴⁸ It also expressed concern, as stated by commenters, that further reducing the tick size for all stocks could harm market quality via pennyng and reduced liquidity at the top of the book.¹²⁴⁹ When originally proposing Rule 612, the Commission also provided an analysis of sub-penny trading and quoting and stated that there was, at the time, no industry standard for trading and quoting increments.¹²⁵⁰ The Commission's sub-penny analysis suggested that, at the time, sub-penny trading was primarily used to facilitate pennyng because sub-penny trades congregated at \$0.001 and \$0.009 rather than having a uniform distribution or clustering midpoint prices (*i.e.*, in \$0.005 increments), justifying the use of some minimum pricing increment.¹²⁵¹

When adopting Rule 612, the Commission did not empirically analyze whether a minimum pricing increment of \$0.005 would have harmed or helped market quality for some stocks, and specifically did not opine on a tiered tick structure such as is being adopted. The analysis provided therein was in the context of a uniform tick size applicable to all stocks. Within this context, the Commission concluded that “the marginal benefits of a further reduction in the minimum pricing increment [below \$0.01 for all stocks] are not likely to justify the costs to be incurred by such a move”¹²⁵² The analysis provided in this release does not disagree with that assessment. Applying a tick size lower than \$0.01 for all stocks could cause harm to stocks with wide quoted spreads due to pennyng concerns and fragmenting liquidity.

¹²⁴⁸ See 2004 Regulation NMS Proposing Release, *supra* note 31, at 11170.

¹²⁴⁹ *Id.*; see also Proposing Release, *supra* note 11, at 80280 (“Minimum pricing increments that are too small can also add to complexity in trading and increase the risk of stepping ahead”); see also *supra* note 994 for the definition and discussion of pennyng.

¹²⁵⁰ *Id.* at 11171. Although Nasdaq and the exchanges permitted quoting in single penny increments, these markets allowed trades to be printed in increments below a penny. Although certain online brokers only accepted orders priced in one-cent increments, ECNs and Nasdaq market makers accepted orders and executed trades in sub-penny increments. While market makers quoted through Nasdaq only in penny increments, they could display orders in ECNs in sub-pennies. Exchanges, where the majority of trading volume occurred, were bound by the Decimals Implementation Plan, which was ordered by the Commission, and which ultimately established \$0.01 as the tick size for exchange quotes. Other market participants, however, were not so bound leading to non-standard quoting increments across various venues such as ECNs.

¹²⁵¹ *Id.* at 11169.

¹²⁵² *Id.* at 11170.

Additionally, the need to address tick-constrained stocks has increased substantially in the subsequent nearly two decades as tick constraints have become more pervasive over time. Table 3 indicates that in 2023, about 74% of share volume was associated with securities trading with quoted spreads at or below \$0.015; following the same methodology, in 2005 the figure was about 54%.¹²⁵³ This statistic understates the true increase in trading in tick-constrained securities because overall average daily trading volume has more than doubled over the same period of time.¹²⁵⁴ Thus, precisely because average quoted spreads have been coming down, the benefits of alleviating the tick constraint have increased substantially since 2005. Additionally, as discussed throughout this section, there has been considerable research since the implementation of Rule 612 in 2005 by the Commission, industry members, and academics surrounding tick sizes that did not exist when Rule 612 was adopted. This research supports the notion that a tick size below \$0.01 will likely improve market quality for some stocks.

One commenter illustrated its disagreement with the Commission's use of the TSP analysis by presenting a hypothetical TSP in which the tick size is increased from \$0.01 to \$0.15.¹²⁵⁵ The commenter stated that such a change “would have negatively impacted a greater range of stocks . . . and predictably liquidity conditions in those stocks would have meaningfully improved at the end of the pilot when the changes were reversed.”¹²⁵⁶ The commenter proceeded to state that “this experiment would not suggest that regulators should always reduce the minimum quoting increment for tick-constrained symbols by a factor of fifteen.”¹²⁵⁷ The commenter further stated that the TSP “merely reverted to the *status quo* after a failed experiment”, and this “reversion provides no information on what would be expected to occur if minimum quoting increments were further

¹²⁵³ These patterns are not driven by a change in sub-dollar trading (which may benefit from a narrower tick size); the patterns are not materially changed when symbol-days with average prices below \$2 or \$5 are dropped from the sample.

¹²⁵⁴ This statistic is computed by comparing the average daily share volume in all securities covered by WRDS Intra-day indicators in 2005 and 2023. Additionally, total trading volume has also more than doubled over that same time period. Thus, there is more trading volume and more of it is trading in a tick-constrained environment.

¹²⁵⁵ See Citadel Letter I at 12.

¹²⁵⁶ *Id.*

¹²⁵⁷ *Id.* (emphasis in original).

¹²⁴⁵ See Proposing Release, *supra* note 11, at 80273 n.85.

¹²⁴⁶ For example, the potential negative effects from sub-pennyng would be higher from a 1:5 split compared to a 1:2 splits because the cost of gaining priority over other liquidity providers, by updating the best price by a single tick, is lower with a smaller tick. The risk liquidity fragmenting across price levels would also be higher with a 1:5 split as compared to a 1:2 split. See *supra* section VII.D.1.b.i for further discussion.

¹²⁴⁷ See, e.g., Equity Market Structure Citadel Letter at 17, Craig Louis Letter attached to Virtu Letter II at 32–33, and Virtu Letter II at 16. See *supra* section VII.C.1.b for a discussion of the Commission analysis referred to by commenters.

reduced to levels that have never before been tested.”¹²⁵⁸

The Commission disagrees with this assessment in several respects and continues to believe that analysis of the TSP provides meaningful information for the effects of the amendments. The TSP enables analysis that empirically tests whether market quality depends on being tick-constrained. The TSP provides two events that can be used for this test: one at the start of the TSP when tick sizes were increased for certain stocks, and one at the end of the TSP where tick sizes for those same stocks were decreased. Academic research shows that the effects of both of these events are consistent with the theory that stocks with few ticks intra-spread have worse market quality.¹²⁵⁹ The Commission provided its own analysis of the end of the TSP; the end of the TSP involved a reduction in tick size, which directionally corresponds to what will happen under the adopted rule. This analysis found evidence to support the theory that stocks with too few ticks intra-spread have worse market quality. The Commission therefore disagrees that the TSP analysis “provides no information” as to the effects of the adopted rules.

The commenter states that “the end of the Tick Size Pilot provides no basis for suggesting that regulators should always reduce the minimum quoting increment for tick-constrained symbols by a factor of five.” The Commission does not reach the conclusion that regulators should always reduce the minimum quoting increment by a factor of five, and indeed the Commission is not adopting such a rule. As discussed earlier in this section, TSP analysis indicates that for stocks with 1–2 ticks intra-spread, reducing the tick size improves market quality on average. While the Commission is reducing the tick size by a factor of two rather than five for some stocks, the direction is likely to be the same as what was observed in the TSP, though the magnitude may be different.¹²⁶⁰

Furthermore, the commenter assumes in the hypothetical experiment of a bigger increase in the tick size, that this increase would have “negatively impacted” stocks. However, the fact that causing stocks to become tick-constrained worsens their market quality is an assumption made by the commenter. Absent evidence, such as the evidence provided by the TSP, it is unclear upon what the commenter bases

this assumption. The ability to make this inference, that being tick-constrained worsens market quality, is precisely why analyzing the TSP is valuable because it provides the empirical result which permits one to employ with confidence the commenter’s assumption in its hypothetical.¹²⁶¹

With regard to the commenter’s statement that the TSP conclusion “provides no information on what would be expected to occur if minimum quoting increments were further reduced to levels that have never before been tested,”¹²⁶² while it is true that the tick sizes in the adopted amendments are not among the tick sizes implemented in the TSP, this fact does not render the TSP analysis uninformative. The theory that stocks that are tick-constrained will trade better with more ticks intra-spread, successful as it was in predicting the market quality effects of the end of the TSP, can be reasonably relied upon to help determine the effects of the amendments. What matters is not the magnitude of the spread, or the size of the tick, but the number of ticks intra-spread.¹²⁶³

One commenter stated that the analysis in the Proposing Release should have accounted for both fixed effects and volatility, as well as other variables.¹²⁶⁴ Barardehi et al. (2022) provide estimates that account for fixed effects and a number of control variables including volatility.¹²⁶⁵ This paper shows that the results shown in the Proposing Release and repeated below are robust to these effects.

Commission Empirical Analysis: The Proposing Release provided a review of the existing TSP empirical academic research.¹²⁶⁶ This research consistently found that stocks that became tick-constrained by the TSP, on average, traded better across many market quality dimensions when their tick size was reduced from \$0.05 to \$0.01. Some

analysis also showed that some stocks with wide spreads traded better with the \$0.05 tick than with the \$0.01 tick. The empirical analysis in the Proposing Release sought to identify the thresholds where the TSP tick size change transitioned from harmful, to benign, to beneficial. Specifically, table 8 provides analysis that examines the impact of the end of the TSP on a wider range of quoted spread profiles than simply tick-constrained or not. This analysis focuses on the end of the TSP, when the tick size was reduced from \$0.05 back to \$0.01, because that event more closely matches the amendments, which reduce the tick size.

The analysis presented in table 8 uses a difference-in-differences methodology to study the effect of lowering the tick size from \$0.05 to \$0.01 on TSP stocks at the end of the TSP.¹²⁶⁷ TSP treated and control stocks are assigned near the end of the TSP into one of four bins ranging from the most tick-constrained in the first bin to the least constrained in the fourth bin.¹²⁶⁸ Key variables such as quoted depth and spreads were measured before and after the tick size was lowered, and difference-in-differences estimation methods were

¹²⁶⁷ Difference-in-differences is a statistical technique in which the effect that a treatment has on some response variable is estimated by comparing the average change in the response over time in the treatment group to the average change in the control group.

¹²⁶⁸ Bin assignments are calculated according to the stock’s average quoted spreads for May and June of 2018, near the end of the TSP. Specifically, we use WRDS Intra-day indicators to collect the time weighted quoted spread for all TSP and control stocks for each trading day in May and June 2018. Then for each stock we calculate the equally-weighted average quoted spread across all trading days. Based on this average, TSP and control stocks are sorted into one of four bins. The first bin is for stocks with quoted spreads (\$0.00, \$0.06). Empirically, for stocks in the TSP, this bin includes stocks that nearly always traded at the minimum quoting increment of \$0.05 during the TSP. The second bin is for stocks with quoted spreads in the range (\$0.06, \$0.09). For stocks in the TSP, this bin is said to include those stocks with one to two ticks intra-spread during the TSP. The third bin is for stocks that had quoted spreads of (\$0.09, \$0.15) or approximately 2–3 ticks intra at a \$0.05 tick increment. The fourth bin is for stocks with quoted spreads greater than \$0.15. The TSP had three test groups: the first group applied the \$0.05 tick only to quoting, the second group applied the \$0.05 tick to quoting and trading (with exceptions for benchmark and midpoint trades and for certain retail price improvement trades), and the third group applied the \$0.05 tick to trades and quotes the same as the second group but also had a trade at rule applied. Barardehi et al., *supra* note 231 provide similar analysis, and also expand the analysis in many dimensions. Their analysis finds evidence that all key results presented here are robust along many dimensions including the test group analyzed and to many other factors including fixed effects and volatility—factors that one commenter suggested that the Commission should consider in their TSP analysis, *see* Virtu Letter II at 17.

¹²⁶¹ More specifically, the commenter’s hypothetical assumes that the start of a large tick size increase would worsen liquidity, then concludes this means that evidence from the end of the TSP is uninformative because it simply reverses the effect. But, this conclusion is incorrect because the TSP results from both the imposition and conclusion of the TSP are what make the first assumption credible.

¹²⁶² *See* Citadel Letter I at 12.

¹²⁶³ *See infra* section VII.F.1 for a discussion of reasonable alternative tick sizes.

¹²⁶⁴ *See* Virtu Letter II at 15.

¹²⁶⁵ *See* Barardehi et al., *supra* note 231. The authors control for market capitalization, dollar volume, average quoted spread, and return volatility, *see* analysis associated with their table 11.

¹²⁶⁶ *See* Proposing Release, *supra* note 11, section V.D.1.

¹²⁵⁸ *Id.*

¹²⁵⁹ *See, e.g.,* Barardehi et al., *supra* note 231.

¹²⁶⁰ *See supra* note 1246 and surrounding text for additional discussion.

used to examine how these variables reacted to the tick size change. The analysis uses ordinary least squares¹²⁶⁹ and quantile (median) regressions¹²⁷⁰ to estimate the following regression model:¹²⁷¹

$$Y_{j,t} = \alpha_0 + \alpha_p \text{Pilot}_j + \alpha_E \text{Event}_t + \beta (\text{Pilot}_j \times \text{Event}_t) + \mu_{j,t}$$

where the quantile regression optimizes:¹²⁷²

$$\beta \in \underset{\alpha_0, \alpha_p, \alpha_E, \beta}{\operatorname{argmin}} \sum_{j,t} \rho_{0.5}(u_{j,t})$$

TABLE 8—EFFECTS OF A REDUCTION IN TICK SIZE ON QUOTING AND TRADING OUTCOMES^a

Spread bin #	OLS				Quantile (median) regression			
	Quoted spread (\$) May & June 2018				Quoted spread (\$) May & June 2018			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Depth (100 shares)	*** −22.5 [−12.02]	*** −5.30 [−7.09]	*** −1.55 [−4.40]	−0.51 [−1.30]	*** −11.8 [−16.99]	*** −3.16 [−23.52]	*** −0.96 [−17.81]	*** −0.21 [−4.30]
Depth (\$1,000)	*** −16.7 [−14.58]	*** −8.41 [−10.94]	*** −4.67 [−7.82]	*** −2.06 [−3.66]	*** −11.2 [−22.04]	*** −7.27 [−20.70]	*** −3.96 [−12.58]	*** −1.48 [−4.14]
Quoted Spread (\$)	*** −0.033 [−18.71]	*** −0.027 [−6.46]	*** 0.023 [2.99]	*** 0.12 [5.51]	*** −0.034 [−35.41]	*** −0.031 [−10.31]	*** 0.012 [2.03]	*** 0.12 [6.80]
Relative quoted Spread	*** −0.0049 [−9.59]	* −0.00097 [−1.80]	0.00034 [0.53]	*** 0.0046 [3.30]	*** −0.0041 [−8.54]	*** −0.0014 [−6.89]	0.00021 [0.74]	*** 0.0034 [4.66]
Effective spread (\$)	*** −0.027 [−4.97]	−0.026 [−1.43]	*** 0.029 [5.17]	** 0.038 [2.16]	*** −0.026 [−58.10]	*** −0.021 [−12.81]	−0.0018 [−0.63]	*** 0.051 [4.81]
Relative eff. spread	*** −0.0039 [−3.12]	0.00043 [0.17]	0.0055 [1.36]	*** 0.0028 [4.42]	*** −0.0030 [−10.78]	*** −0.0010 [−9.58]	−0.00013 [−1.09]	*** 0.0016 [3.23]
Cancel-to-trade	*** 5.10 [5.99]	*** 6.69 [6.38]	*** 7.56 [6.79]	*** 18.8 [8.84]	*** 4.56 [7.75]	*** 5.49 [7.79]	*** 6.87 [10.44]	*** 12.3 [10.61]
Odd-lot rate (%)	*** 4.89 [9.62]	*** 5.61 [8.04]	*** 2.85 [4.35]	** 1.49 [2.15]	*** 5.59 [8.99]	*** 6.39 [8.02]	*** 3.29 [4.72]	** 1.85 [2.51]
Realized spread (\$)	*** −0.014 [−27.94]	*** −.0099 [−7.43]	.00037 [0.12]	*** 0.040 [4.45]	*** −0.014 [−48.36]	*** −0.013 [−17.96]	*** −0.0068 [−5.13]	*** 0.038 [5.64]
Relative real. spread	*** −0.024 [−11.82]	−0.0032 [−1.36]	−0.0039 [−1.25]	** .0014 [2.37]	*** −0.0014 [−14.08]	*** −0.0054 [−12.52]	*** −0.0013 [−2.77]	*** .0012 [3.65]
Volume (1,000 shares)	26.5 [1.30]	** 30.3 [2.13]	12.5 [1.32]	−5.41 [−1.07]	19.1 [1.42]	3.35 [0.40]	0.20 [0.04]	−3.25 [−2.44]
Cum Depth 10c from mdpt	*** −0.17 [−3.93]	*** −0.26 [−5.00]	** −0.27 [−2.59]	** −0.34 [−2.37]	*** −0.49 [−5.51]	*** −0.54 [−6.29]	*** −0.45 [−4.91]	** −0.63 [−3.15]
Cum Depth −10c from mdpt	*** −0.22 [−5.28]	*** −0.19 [−3.74]	*** −0.37 [−3.44]	** −0.45 [−2.83]	*** −0.49 [−6.33]	*** −0.42 [−5.21]	*** −0.50 [−5.68]	** −0.79 [−2.75]
CRT 10 round lots	*** −0.026 [−19.56]	−0.001 [−0.19]	*** 0.035 [3.99]	*** 0.14 [1.03]	*** −0.037 [−2.72]	*** 0.085 [2.75]	*** 0.035 [4.20]	** 0.075 [2.37]

^a This table presents the effects of a reduction in minimum tick size from \$0.05 to \$0.01 cent on various quoting and trading outcome variables. The first bin is for stocks with quoted spreads (\$0.00, \$0.06). The second bin is for stocks with quoted spreads in the range (\$0.06, \$0.09). The third bin is for stocks that had quoted spreads of (\$0.09, \$0.15). The fourth bin is for stocks with quoted spreads greater than \$0.15. A difference-in-differences regression with no control variables is estimated using data covering Control, Test Group 2, and Test Group 3 TSP stocks from 08/01/2018–11/30/2018. All observations are at the stock day level. For each outcome variable $Y_{j,t}$, listed in the left-hand side column, the table presents only the difference-in-differences coefficient estimates that indicate the effect of the TSP on the dependent variable. Estimates are performed by past quoted spread subsamples that decompose the sample based on average quoted spreads during May–June of 2018. Among the outcomes' variables, the quoted spread refers to the distance between the NBBO midpoint and the NBBO quote. The effective spread is the distance between the NBBO midpoint and the realized trade price; the realized spread is the distance between a future NBBO midpoint (5-minutes ahead) and the trade price. Relative spread measures are calculated as the spread scaled by the NBBO midpoint. The cancel-to-trade ratio is the daily number of order cancellations divided by the number of trades, for displayed orders. The odd-lot rate is the percentage of trades in a day which executed against an odd-lot quote. CRT 10, or the cost of a round-trip trade of 10 round lots, measures the cumulative transaction costs from buying and then immediately selling 10 round lots. The CRT assumes that an order that is larger than the displayed depth at the best price will not execute in full at that price. Instead, the assumed unfilled portion will execute at worse prices until completely filled with displayed depth. All data are Winsorized at the 1% and 99% level. The numbers in the [] brackets reflect t-statistics that are based on two-way stock-and-date clustered standard errors. Symbols *, **, and *** reflect statistical significance at 10%, 5%, and 1% type-1 error levels.

As discussed in the Proposing Release, this analysis provides evidence of a fundamental tradeoff between accurate pricing on one hand and incentives for liquidity provision on the other. Across all specifications, the end

of the TSP was associated with a decrease in depth at the NBBO, when the tick size was reduced from \$0.05 to \$0.01, as signified by the negative and, in most cases, statistically significant coefficients reported. The reduction in

shares available at the NBBO was the greatest for stocks with tighter quoted spreads and smaller for stocks with wider quoted spreads. The finding that tighter quoted spread stocks experience the greatest decline in depth at the

¹²⁶⁹ Ordinary least squares (OLS) regression refers to a statistical technique for estimating the linear relationship between an independent variable and dependent variables by minimizing the sum of squared errors between the estimate and the observed independent variable. The use of OLS and quantile regressions is common in the literature on the TSP pilot.

¹²⁷⁰ The primary advantage to quantile regressions is that they are less sensitive to outliers that can affect mean inference in OLS. Thus, median regressions provide additional robustness to the analysis and ensure that results are not driven by outliers.

¹²⁷¹ In this equation the variable Y denotes the response variable of interest such as quoted spread and depth. The subscripts j and t serve to index stocks and days respectively. α_0 , α_p , α_E , and β are coefficients (to be estimated), and $u_{j,t}$ is the error term. Pilot_j is an indicator variable that equals 1 if stock j was in the treatment group, or 0 if stock j was in the control group. Event_t is an indicator variable which is equal to 1 if the day t was post the treatment event and equals 0 otherwise. Table 8 reports the difference-in-differences estimator of β for a different response variable Y across the different quoted spread bins. One commenter criticized this model for failing to include fixed

effects and not controlling for other criteria such as volatility. See Virtu Letter II at 15. A very similar analysis, which did consider fixed effects and a host of control variables including volatility, is included in Barardehi et al., *supra* note 231. Their analysis showed that all key results were economically unchanged when considering fixed effects and a host of control variables.

¹²⁷² In this equation $u_{j,t}$ is the error term from the previous regression specification equation, *supra* note 1271, and the loss function is defined as: $\rho_\tau(u) = \tau \max(u, 0) + (1-\tau) \max(-u, 0)$; where $0 < \tau < 1$.

NBBO is consistent with the idea that, for these stocks, the \$0.05 tick was the most constraining, and so liquidity that would have naturally spread out within the quoted spread given a smaller tick, bunched at the wider tick increments, and that once the tick-constraint was relaxed this liquidity naturally spread out over the additional price levels. For less tick-constrained stocks, the bunching was less severe since liquidity already had some room to spread out.

One commenter stated that the Commission did not provide any analysis of the effect of the proposal on displayed liquidity and liquidity deeper in the book, including with respect to less liquid securities and during times of market stress.¹²⁷³ The Proposing Release did examine the effect of a tick reduction on displayed liquidity and cited academic literature for further analysis.¹²⁷⁴ The same commenter stated that reducing the tick as presented in the proposal would reduce depth at the NBBO by more than 82%.¹²⁷⁵ The Commission acknowledges that, given the magnitude of the reduction in the proposal, it is conceivable that such a reduction could have occurred for some stocks. Barardehi et al. (2022) document that depth at the NBBO was 50% lower with the \$0.01 tick compared to the \$0.05 tick. However, this was only true for tick-constrained TSP stocks. For stocks with wide quoted spreads, depth was only about 16% lower with the smaller tick size. The TSP was associated with a 1:5 tick size split, and the proposal that the commenter was commenting on would have created a 1:10 split for some stocks relative to the baseline. In contrast, the adopted amendments create a smaller split than either a 1:5 or a 1:10 split. The Commission does expect depth at the NBBO to decrease for stocks receiving the smaller tick size with the TSP analysis providing a likely higher end estimate of the magnitude of the decrease since the TSP was a bigger change to the baseline than the adopted amendments.

For stocks in the first or second bins, table 8 demonstrates that lowering the tick to \$0.01 leads to significantly lower quoted spreads. These stocks went from having approximately 1–2 ticks inside the quoted spread, with a \$0.05 tick, to having 1–10 ticks inside the quoted spread, with a \$0.01 tick. This finding is consistent with the idea that for stocks that are tick-constrained the effect of decreasing the tick size will

narrow quoted spreads by improving competition. For the stocks in the third and fourth bins, the story is different, as the reduction in the tick size leads to wider quoted spreads. These stocks went from having more than two or more ticks within the quoted spread, with a \$0.05 tick, to having more than 10 ticks within the quoted spread, with a \$0.01 tick. This result is consistent with the idea that for wider quoted spread stocks, the prevailing effect of reducing the tick size was to increase transaction costs and widen spreads by fragmenting liquidity and increasing the risk of pennyning which made trading more costly leading to wider quoted spreads. This pattern of results—namely narrower spreads for the first and second bins and wider spreads for the fourth—holds regardless of whether dollar spreads, relative spreads, OLS, or quantile regressions are used, suggesting this is a robust outcome of the end of the TSP.

The pattern for effective spreads is similar to that observed for quoted spreads. Effective spreads measure the average realized transaction cost for trades as it measures the absolute distance between the realized trade price and the NBBO midpoint at the time of the trade. Effective spreads do not always equal quoted spreads because trades can execute inside the NBBO for numerous reasons, such as odd-lot trades, midpoint trades, and hidden orders. For stocks in bin one—*i.e.*, stocks for which the \$0.05 tick was the most restrictive—all specifications suggest that reducing the tick size was associated with a decrease in realized transaction costs as measured by effective spreads. For stocks in bin four, those with the widest quoted spreads prior to the tick size reduction, all specifications suggest that the reduction in the tick size leads to an increase in transaction costs, measured by effective spreads. For stocks in between these extremes in bins two and three, the results are not as uniform. For stocks in bin two, the sign of the coefficients for all estimates (dollar effective spreads, relative effective spreads, OLS, and quartile regressions) suggests lowering the tick size decreased effective spreads, although not all specifications agree as to statistical significance. The OLS regressions suggest that the effect was statistically insignificant, while the quantile regressions found a statistically significant effect and suggest that effective spreads decreased. For stocks in the third bin, the analysis did not find a consistent, statistically significant change in effective spreads, or in other words, moving from roughly two to

three ticks within the spread to ten to fifteen ticks did not appear to reliably help or harm transaction costs as measured by effective spreads.

These results, like the results for quoted spread, suggest that for stocks for which the narrowing of the tick size meant that the stock went from having less than 2 ticks within the quoted spread to 1–10 ticks within the quoted spread, the effect of reducing the tick was beneficial in terms of reducing transaction costs. For stocks with very wide quoted spreads, reducing the tick size appeared to harm liquidity, which is consistent with fragmentation and pennyning being the prevailing effect.

The theoretical discussion above suggests that executing a larger order may become more complex with a smaller tick size—meaning it may take visiting more venues as well as executing across more price levels to execute an order with a smaller tick size. This potential outcome is explored using the “cancel-to-trade” ratio. A higher ratio indicates more frequent canceling of orders per the amount of trading volume, and it is an indication that market participants are more active in managing their quotes and their order strategies. In this analysis, both the OLS and the quantile regressions confirm that a smaller tick resulted in a statistically significant increase in the cancel-to-trade ratio, suggesting more complexity. Additionally, the magnitude of the effect is increasing in the quoted spread, with wider quoted spreads having larger coefficients, suggesting a larger effect in the cancel-to-trade ratio for stocks with wider spreads. This pattern is consistent with pennyning and increased complexity having a greater impact on stocks with wider quoted spreads. These stocks are unlikely to receive the smaller tick size under the adopted amendments.

The analysis also looks at the effect of lowering the tick size at the end of the TSP on the usage of odd-lot orders. Across all quoted spread bins, the usage of odd-lot orders increases when the tick size decreases. This finding is consistent with the notion that liquidity will be spread out over more levels leading to an increased use of odd-lot orders to allow liquidity providers to offer smaller levels of liquidity at finer price increments.¹²⁷⁶ This result also suggests that a lower tick size increases the need for market participants to have ready access to odd-lot information given that the lower tick size can be expected to increase the usage of odd-lot quotes.

¹²⁷³ See Citadel Letter I at 9.

¹²⁷⁴ See Proposing Release, *supra* note 11, section V.D.1.

¹²⁷⁵ See Citadel Letter I at 5.

¹²⁷⁶ See also Virtu Letter II at 6.

Effective spreads provide a measure of liquidity providers' revenue for the immediate execution of an incoming order and the contrasting economic effects also have implications for how liquidity providers' revenue will be affected by a lower tick. The effective spread captures the liquidity premium, paid by those submitting orders for immediate execution, and can theoretically be decomposed into two components: *Effective Spread* = *Realized Spread* + *Price Impact*.¹²⁷⁷ One component of the effective spread is the price impact or adverse selection component. It is the change in the NBBO midpoint at the time of trade to some point in the future. This component of the effective spread captures the portion of the effective spread liquidity providers lose from trading with investors who are more informed than they are and is also referred to as the adverse selection component of the bid-ask spread. The remainder of the effective spread, after removing the adverse selection component, is the realized spread. This portion of the effective spread acts as a proxy¹²⁷⁸ for the compensation to the liquidity provider for its non-adverse selection costs. If a smaller tick decreases revenue for liquidity providers, by allowing bid and ask prices to more accurately reflect supply and demand, then this effect should manifest as a decrease in realized spreads for liquidity providers. However, if increased order book fragmentation and penny risk increase the cost of providing liquidity,

then liquidity providers will need to be compensated for these costs in order to provide liquidity and, thus, realized spreads will increase. To the extent that the two effects offset one another, realized spreads might not change.

For tick-constrained stocks in bin one, the analysis indicates a decrease in realized spreads across all specifications, and when using dollar or relative realized spreads when the tick size was reduced from \$0.05 to \$0.01. This result is consistent with the notion that liquidity providers' non-adverse selection revenues will decrease due to bid and ask prices being more reflective of supply and demand with a smaller tick. The opposite occurs for stocks with wide quoted spreads in bin four, where realized spreads increase significantly—consistent with liquidity providers needing to be compensated for the increased cost and complexity associated with trading a wide quoted spread stock in a small tick environment. For stocks in the middle two bins, the effect of lowering the tick size on realized spreads is unclear, as about half of the specifications indicate no change in realized spreads while the other half indicate lower effective spreads.

One commenter states that the Proposing Release did not address how the rule would affect institutional transaction costs, given that institutional traders frequently trade, and are concerned with sourcing larger quantities.¹²⁷⁹ However, as considered here, and in the Proposing Release, the Commission considered multiple measures of depth beyond the NBBO, and Barardehi et al. (2022) also considers more. This depth beyond the top of the book analysis uses MIDAS data to study how the tick size change affected liquidity deeper in the book. Analyzing liquidity deeper in the book is valuable because it gives an indication of how trading larger orders, which must go deeper in the book to be fulfilled may be affected by a change in the tick size. Specifically this analysis calculates the daily average cumulative shares available at \$0.10 above and below the midpoint for control and treated stocks, and uses the same difference-in-differences analysis to examine the effect of reducing the tick size on cumulative depth.¹²⁸⁰ Our analysis suggests that reducing the tick

size also reduced the total depth available deeper in the book with the coefficient for bin 4—i.e., those with the widest quoted spreads—being the largest in magnitude. This finding is consistent with a smaller tick discouraging the posting of displayed liquidity due to penny concerns for stocks with wide quoted spreads.

These depth of book findings do not directly imply that trading deeper in the book became more expensive for two reasons. First, research suggests the use of non-displayed quotations increases significantly when the tick size is reduced.¹²⁸¹ Thus the decline in liquidity that we document is only a decline in displayed liquidity. Second, quotes tend to congregate at the price just worse than the quoter's desired price so that the quoter does not lose money on a transaction. When a wider tick is tightened, quotes that were previously congregated at the wide tick will spread out at prices better than the previous tick allowed. Thus, a market participant taking liquidity from multiple price layers in the order book to fulfill an order will have some shares that transact at superior prices than it would have with the wider tick.¹²⁸²

Table 8 also presents the effect of the TSP conclusion on the round-trip cost to transact a trade for 10 round lots (1,000 shares).¹²⁸³ This analysis suggests mixed results for the effect of the tick size reduction on the cost of

¹²⁸¹ See analysis presented in Nasdaq Intelligent Tick Proposal, *supra* note 150; see also Justin Cox, et al., *Increasing the Tick: Examining the Impact of the Tick Size Change on Maker-Taker and Taker-Maker Market Models*, 54 Fin. Rev. 417 (2019); Amy K. Edwards, et al., *The Effect of Hidden Liquidity: Evidence from an Exogenous Shock* (working paper Mar. 1, 2021), available at <https://ssrn.com/abstract=3766512> (2021) (retrieved from SSRN Elsevier database).

¹²⁸² Consider a numeric example. A market with a \$0.05 tick is quoting asks of 500 shares at \$10.05 and 500 shares at \$10.10. An investor wishing to purchase 700 shares would purchase 500 at \$10.05 and 200 at \$10.10 for a total price of \$7,045. If the tick shrinks to \$0.01 and cumulative shares posted decline by 20%—for example—but those shares are spread evenly over the finer grid then there would be 80 shares at each price level from \$10.01 to \$10.10. An investor wishing to buy 700 shares would need to purchase 80 shares at each price level from \$10.01 to \$10.08 and 60 shares at \$10.09 for a total purchase price of \$7,034. So even though total depth declined, the cost to execute a 500-share trade would decrease due to more efficiently spreading liquidity across more price levels.

¹²⁸³ A round-trip trade refers to executing an order to buy or sell the stock and immediately reversing the position with an equal countervailing order. We compute the cost of a roundtrip trade following the methodology laid out in Griffith and Roseman (2019), *supra* note 1002 and Chung, et al., *supra* note 1209. The methodology uses MIDAS data to take snapshots of the order book at 15-minute increments throughout the trading day and calculates the transaction costs associated with walking the book up 5 or 25 round lots to execute a large trade.

¹²⁷⁷ Effective spreads can be interpreted as what liquidity providers expect to earn from providing liquidity, assuming that prices do not change before the liquidity provider is able to unwind its position and realize its profit. Under this interpretation, realized spreads would proxy for what liquidity providers actually earn, taking into account that the market price may have moved against the liquidity provider before it could unwind its position. *Effective Spread* = *Realized Spread* + *Price Impact*. For a full mathematical decomposition of effective spreads into realized spread and price impact components see Peter N. Dixon, *Why Do Short Selling Bans Increase Adverse Selection and Decrease Price Efficiency*, 11 Rev. Asset Pricing Stud. 122 (2021) app. at 165.

¹²⁷⁸ Realized spreads do not measure the actual trading profits that market makers earn from supplying liquidity. In order to estimate the trading profits that market makers earn, we would need to know at what times and prices the market maker executed the off-setting position for a trade in which it supplied liquidity (e.g., the price at which the market maker later sold shares that it bought when it was supplying liquidity). If market makers offset their positions at a price and time that is different from the NBBO midpoint at the time lag used to compute the realized spread measure (Rule 605 realized spread statistics are measured against the NBBO midpoint 5 minutes after the execution takes place), then the realized spread measure is an imprecise proxy for the profits market makers earn supplying liquidity.

¹²⁷⁹ See MEMX Letter at 10.

¹²⁸⁰ In the regressions we take the natural log of shares available. This conversion helps standardize shares available for stocks with different prices by making the interpretation in terms of percentage changes. See also e.g., STA Letter at 6 and CCMR Letter at 24 suggesting that a smaller tick size could affect depth deeper in the book.

executing a 10-round lot trade. For bin 1 stocks, the total round-trip cost of a 10-round lot trade decreased when the tick size was lowered—suggesting an improvement in liquidity deeper in the book. For stocks in bin 2 (*i.e.*, less tick-constrained stocks), the effect was not clear. The OLS regressions suggested no effect, while the quantile regressions suggested an increase in trading cost. For stocks in bins 3 and 4 (*i.e.*, those that were not tick-constrained by the \$0.05 tick), the effect of lowering the tick size was to increase transaction costs for larger trades. These results cohere with the idea that when stocks are tick-constrained the pricing efficiency made possible by a smaller tick improves liquidity, and for stocks with wider quoted spreads a smaller tick harms liquidity by making individuals less willing to post displayed liquidity due to complexity and the risk of pennyning.

In conclusion, the analysis provided here suggests that, for stocks that were limited to just 1–2 ticks intra-spread by the \$0.05 tick, the reduction to a \$0.01 tick provided an improved trading

environment. Thus, trading in an approximate 1–10 tick range intra-spread provided a superior environment to trading in a 1–2 ticks intra-spread range. One caveat here is that the analysis highlights a key tradeoff with a smaller tick for stocks with narrow quoted spreads. They tend to have less depth at the NBBO, but narrower quoted spreads. Thus, the total effect of this tradeoff on execution costs is largely a function of the size of the trade being implemented with smaller trades receiving improved terms while sufficiently large trades get worse terms with a narrower quoted spread. However, as discussed in greater detail in Barardehi et al. (2022), for tick-constrained stocks the point in terms of trade size at which a tick size reduction harms execution quality is quite large, around 50 round lots.¹²⁸⁴ Additionally, for stocks with quoted spreads greater than \$0.15, where a \$0.01 tick implied

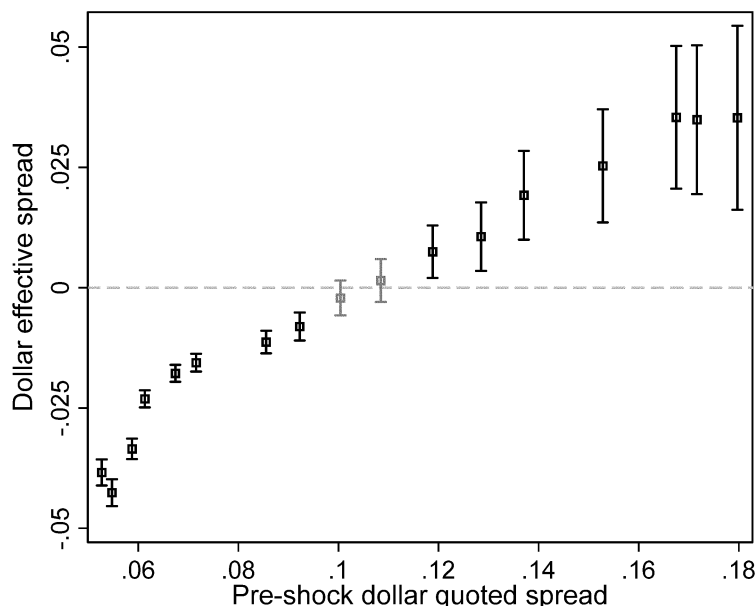
¹²⁸⁴ See Barardehi et al. (2022) Table 4. *See also* Citadel Letter I at 11 requesting an analysis of the joint impact on depth and quoted spread. *See also* Virtu Letter II at 18 stating that lower quoted spreads would harm markets by reducing the incentive to post liquidity.

more than 15 ticks intra-spread, a \$0.05 tick where there were only 3 ticks intra-spread, appeared to provide a superior trading environment. For stocks with quoted spread between \$0.10 and \$0.15, it is not clear which tick size provided a superior trading environment.

In figure 2, data analysis shows how the quoted spread of a stock during the TSP (“pre-shock dollar quoted spread”) correlates with how investor transaction costs, as captured by effective spreads, changed when the TSP ended. For stocks with an average of fewer than two ticks intra-spread (*i.e.*, those with pre-shock quoted spreads of \$0.10 or less), a reduction in tick size from 5 cents to 1 cent significantly reduces effective spreads.¹²⁸⁵ For stocks with an average of more than three ticks intra-spread (*i.e.*, those stocks with pre-shock quoted spreads greater than \$0.15), a narrower tick size increases effective spreads. These results are broadly consistent with the findings reported in table 8.

¹²⁸⁵ See Proposing Release, *supra* note 11, at 80322–80323, including figure 2, which is also in Barardehi et al., *supra* note 231.

Figure 2: Difference-in-Differences Effect of the end of the TSP on Dollar Effective Spreads



Source: Stocks in the TSP imposition period 08/12/2016-12/14/2016, where tick size increased from 1¢ to 5¢ for pilot stocks, are grouped into overlapping 6¢ intervals of average May and June 2016, i.e., pre-shock, quoted spreads: $\{(0, 6¢), (1¢, 7¢), \dots, (15¢, 21¢), (16¢, 22¢)\}$. Stocks in the TSP conclusion period 08/08/2018-11/20/2018, where tick size decreased from 5¢ to 1¢ for pilot stocks, are grouped into overlapping 6¢ intervals of average May and June 2018, i.e., pre-shock, quoted spreads. For each interval, the effect of a tick size change on dollar effective spreads is estimated via difference-in-differences quantile (median) regressions that control for date fixed effects and double-cluster standard errors by stock and date. Point estimates of the treatment effects along with the corresponding 95% confidence intervals are plotted against the median pre-shock quoted spread in the respective interval. See Proposing Release, *supra* note 11, at 80322-80323, figure 1. See also Barardehi et al., *supra* note 231.

The Commission's results in table 8 provide useful information for predicting how the tick size reduction associated with the amendments may affect market quality for stocks priced at, or greater than, \$1.00 per share and that receive the \$0.005 tick size compared to the current baseline. For stocks with prevailing quoted spreads less than \$0.015 there would generally be at most 1.5 ticks intra-spread with a \$0.01 tick, or 3 ticks intra-spread with a \$0.005 tick. The analysis in table 8 for bin one stocks suggests that 1–5 ticks intra-spread provides a better trading environment than does just one tick intra-spread.¹²⁸⁶ Additionally, the

results for bin 2 stocks suggest that moving from 1–2 ticks intra-spread to 5–10 ticks also generally improves market quality across most measures. In short, the TSP analysis suggests that stocks with fewer than 2 ticks intra-spread on average benefited from a tick size reduction. Consequently, this analysis provides support for the belief that

cfm?abstract_id=3763516 (retrieved from SSRN Elsevier database). The paper suggests that stocks reach their optimal price whenever the quoted spread is two ticks wide. While the paper advocates for a lower tick size, particularly for tick-constrained stocks, the two-tick quoted spread conclusion is the result of a highly stylized trading model which does not take into account pertinent factors from outside the model which likely affect quoted spreads such as considerations of time priority and penny concerns. Conditional on there being non-infinitesimal tick and round-lot sizes, their model suggests that a two-tick wide quoted spread is optimal. Otherwise, their model suggests an optimal policy choice of infinitesimal tick and round-lot sizes.

reducing the tick size for stocks that generally have at most 1.5 ticks intra-spread is likely to improve market quality for these stocks. One concern discussed earlier in this section is that a reduction that is too aggressive could harm market quality by providing too many ticks intra-spread. However, the analysis provided in table 8 does not support this outcome since the Tick Size Pilot stocks in bin 1 and bin 2 still saw market quality improvements, implying that narrow tick concerns didn't yet dominate the effect on these stocks, it is unlikely that the smaller tick size reduction associated with this Rule would lead to small tick problems diminishing market quality.

Additional Sources of Information: Commenters also suggested additional settings to identify when stocks are trading with the optimal number of ticks intra-spread. One commenter suggested

¹²⁸⁶ One academic theoretical paper suggests that having a two-tick quoted spread is optimal. See Sida Li & Mao Ye, *Discrete Prices, Discrete Quantities, and the Optimal Price of a Stock* (working paper Mar. 8, 2021, revised Jul. 7, 2023), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3763516 (retrieved from SSRN Elsevier database).

that the Commission should have considered the European Union's tick size approach, associated with MiFID II, which assigns one of over 20 variable tick sizes based on trading price and number of transactions per day, and Japan's tick size approach.¹²⁸⁷

One paper on the European experience cited by commenters studied the effects of a new tick regime introduced by MiFID II on 511 stocks listed on Euronext Paris and found results similar to the TSP analysis in table 8.¹²⁸⁸ In this study the authors point out that MiFID II led to tick size increases for 339 stocks and decreases for 82 stocks. Tick increases were followed by a widening of the quoted spread, an increase in depth near the top of the book, and a reduction in message traffic. Like the TSP analysis in table 8, tick decreases were followed by a narrowing of quoted spreads, reductions in depth at the top of the book, and an increase in message traffic; for a relatively wide price interval, depths remained unchanged. Table 8 finds a reduction in the cost of a round lot trade when low quoted spread securities experience a reduction in the tick; similarly, the analysis of MiFID II documents a reduction in transaction costs when the tick is reduced and the size of the trade is held constant. In sum, the effects of a change in tick size on Euronext Paris largely mirror the effects documented with the TSP in table 8, indicating that the Commission's analysis is documenting a generalizable phenomenon.

However, there are several limitations to using studies of Europe's tick size regime. Research based on experience with the E.U. regime is difficult to apply to this Rule because the criteria in this Rule for determining the tick size is the TWAQS, which is not a factor in the European setting. When tick sizes change in Europe, it is due to changes in price or trading volume which can simultaneously affect quoted spreads. The Commission is unaware of research using the tick sizes associated with MiFID II to identify the thresholds, in terms of quoted spread, where a stock likely benefits or is harmed by a modification of the tick size, and the commenter did not provide such research.

In addition, it could be difficult to apply such analysis to the U.S. setting due to a number of structural differences between the European market and the U.S. markets. Key among these is that European financial markets are not as integrated as the U.S. national market system. For example, there is currently no consolidated tape or requirement to route orders to the exchanges with the best prices in the E.U.¹²⁸⁹ This fact can affect inference in the context of analyzing this Rule because it means that existing studies of the effect of the European tick size regime are generally limited to one exchange (e.g., the London Stock Exchange).¹²⁹⁰ This can be a significant limitation when trying to apply insights from European studies to U.S. markets because, as has been found in existing research, using data from one exchange as compared to across all exchanges can lead to opposite market quality effects being documented.¹²⁹¹

As discussed above, a commenter also suggested that the Commission should have considered the effects of tick size modifications in Japan to inform the appropriate thresholds for the tick size change considered in this Rule.¹²⁹² The Tokyo Stock Exchange (TSE) assigns tick sizes ranging from 0.1 (JPY) to 100,000 (JPY) depending on the price of the security in question. Stocks in the TOPIX 100 index have a different tick size schedule than do other securities. Again, making inferences from the TSE to this Rule is difficult due to the structural differences between the way that the tick sizes operate. On the TSE, tick sizes are price determined, under this Rule, tick sizes depend on the prevailing quoted spread.¹²⁹³ Additionally, trading in Japan is largely consolidated on the TSE, whereas in the United States it is considerably more fragmented suggesting the same issue relating to inference as can occur with the European studies.

In considering the experience in the Japan markets, one study used the median quoted spread to divide stocks on the TSE and examines market

quality.¹²⁹⁴ These researchers find that a tick size reduction reduces quoted spreads for both the narrower and wider quoted spread stocks—although the effects are considerably larger for narrower quoted spread stocks. The results of this study are consistent with those in this release as it documents that for some stocks, particularly those with narrower quoted spreads, reducing the tick size can reduce quoted spreads. This study also documents that depth at the best prices also tends to decrease with a smaller tick. However, this study has limitations in the context of using it to determine the optimal tick to quote size ratio because the authors do not separate stocks using a nominal quoted spread threshold which would allow inference about how stocks with quoted spreads above or below a certain threshold were affected by the tick size. Rather, they simply bifurcate the sample in half which doesn't apply a specific quoted spread threshold and so it is difficult to discern from their study what the optimal tick to quoted spread threshold will be.

One commenter presented two industry studies based on reverse stock splits showing large reductions in percentage spreads and hence trading costs following reverse splits.¹²⁹⁵ When a stock undergoes a reverse split, its share price rises. All else equal, one would expect quoted spreads to widen in proportion so that the trading cost remains constant as a percentage of price. If the stock is tick-constrained, however, a reverse split causes the current penny tick to become lower relative to the (higher) post-split price, relieving the tick constraint and reducing trading costs as a percentage of the trade amount.¹²⁹⁶ One study presented evidence from GE's eight-for-one reverse split, and showed that trading costs—as measured by the quoted spread as a fraction of the stock price—fell 75%.¹²⁹⁷ Another study presented evidence from five tick-constrained ETPs that underwent a five-for-one reverse split; the study found

¹²⁹⁴ See Ingrid M. Werner et al., *Tick Size, Trading Strategies and Market Quality*, 69 *Mgmt. Sci.* 3818 (2023).

¹²⁹⁵ See Why GE's basis point spread was four times higher before its reverse split attached to MEMX Letter at 43–63; see also The Tick Size Debate Revisited attached to MEMX Letter at 64–70.

¹²⁹⁶ See *supra* note 1064 for a numerical example showing the effect that a reverse split has on transaction costs for a tick-constrained stock.

¹²⁹⁷ See Why GE's basis point spread was four times higher before its reverse split attached to MEMX Letter at 43–63. Chart A of the study indicates that the reverse split caused the average quoted spread as a fraction of the share price to decline from approximately 8 basis points to 2 basis points.

¹²⁸⁷ See CCMR Letter at 27.

¹²⁸⁸ Autorité Des Marchés Financiers (AMF), *MiFID II: Impact of the New Tick Size Regime* (March 2018), available at https://www.amf-france.org/sites/institutionnel/files/contenu_simple/lettre_ou_cahier/risques_tendances/MiFID%20II%20Impact%20of%20the%20New%20Tick%20Size%20Regime.pdf. This paper was cited in Nasdaq Letter I at 10; Tradeweb Markets Letter at 4; Robinhood Letter at 50–51; and IEX Letter I at 13.

¹²⁸⁹ See Rule 611 and *supra* note 226.

¹²⁹⁰ See, e.g., Eros Favaretto et al., *Impact of MiFID II Tick-Size Regime on Equity Markets—Evidence From the LSE*, 29 *Eur. Fin. Mgmt.* 109, 109–149 (2023).

¹²⁹¹ For example, Chung, et al., *supra* note 1209, which uses data from all US exchanges, and Griffith and Roseman (2019), *supra* note 1002, who use data from just Nasdaq produce opposite findings in some areas concerning the effect of the TSP on various dimensions of market quality—i.e., the effect of the TSP on the cost to trade very large orders.

¹²⁹² See *supra* note 1287.

¹²⁹³ See *infra* section VII.D.1.b.iii for additional discussion of price as a determinate of tick-constrained securities and thus of the tick size.

that trading costs for these ETPs declined substantially.¹²⁹⁸ These studies are consistent with results in table 8 above—when the tick constraint is relaxed, the quoted spread becomes smaller relative to the share price, thereby reducing transaction costs.

Some commenters provided explicit specifications of what they stated is the optimal tick to quoted spread range.¹²⁹⁹ These commenters presented evidence and views typically suggesting that 2 to 4 ticks intra-spread may be the optimal range. Given the analysis of these commenters, analysis presented here, and additional research,¹³⁰⁰ the Commission believes that the amendments, which only reduce the tick size when prevailing quoted spreads fall below \$0.015, are likely to improve market quality for these stocks on average and are unlikely to lead to detrimental pennyng or complexity concerns. Specifically, while there will likely be less depth at the NBBO and at each price level, quoted and effective spreads are likely to decline such that the cost of executing small and medium size trades will likely decline. Pennyng is unlikely to predominate. This is because, at most, the smaller tick size will result in 3 ticks intra-spread. The analysis contained in this release, additional research,¹³⁰¹ and commenters tend to agree that pennyng is unlikely to be a dominant effect at 3 ticks intra-spread.¹³⁰² In fact, 3-ticks intra-spread falls in the middle of the 2

to 4 ticks intra-spread suggested as potentially optimal by many commenters.¹³⁰³

The narrower quoted spreads from a smaller tick size may result in fewer opportunities for price improvement by retail wholesalers, which may cause execution quality for wholesalers as measured by price improvement statistics to appear worse. However, the prices that retail investors receive for trades in stocks receiving the lower tick size is likely to improve overall relative to the baseline due to a narrower quoted spread, even though the portion of their price labeled price improvement may decline.

One commenter suggested generally that the Commission use simulations to determine the optimal tick size without providing details about how such a simulation could be structured.¹³⁰⁴ However, it is unclear how such simulations would be structured, and the Commission is unaware of existing simulations or of existing frameworks for simulations studying the effect of tick sizes on market quality. Challenges associated with simulations include model accuracy and complexity, data quality, computational limitations, uncertainty and sensitivity, validation and verification, scalability, and the challenges associated with applying simulations to human behavior which is inherently unpredictable, and the challenges associated with modeling dynamic and evolving systems like financial markets.

One commenter, while not opposing a half-cent tick for some stocks, stated that volume on inverted exchanges implied that there may not be a demand to trade with significantly narrower tick sizes.¹³⁰⁵ Inverted venues, which as discussed in section VII.C.2.b, offer a rebate to liquidity demanders and charge a fee to liquidity providers effectively allow market participants to price orders within the tick by the amount of the rebate to liquidity demanders. The commenter states that if there were significant demand to trade within the tick size, then we would expect to see inverted exchanges capture significant market share among truly tick-constrained stocks.¹³⁰⁶

This argument, however, does not take into account the fact that inverted exchanges are less likely to be at the NBBO than maker-taker exchanges and thus the risk of an order not being able

to be fulfilled on an inverted exchange is higher.¹³⁰⁷ If the inverted exchange cannot fill an order it would generally re-route it or cancel it, depending on the terms of the order. Both options are costly as re-routing orders usually involves a re-routing fee charged by the routing exchange and an access fee charged by the receiving exchange, which would make the trade more expensive to transact relative to just sending it first to a high volume maker-taker exchange. The transfer would also take a small amount of time which could increase adverse selection risk for the re-routed order. Failing to execute the order is also costly as it could expose the trader to increased costs if the market moves against the trader in the time it takes to submit a new order. Consequently, market share on inverted exchanges may be low for reasons other than the stock being tick-constrained. For these reasons, low volume on inverted exchanges is not sufficient to identify demand to trade within the quoted spread.

iii. Alternative Definitions of Tick-Constrained

Some commenters supported using TWAQS to determine which stocks are tick-constrained.¹³⁰⁸ Other commenters stated that other criteria, in addition to or in place of the quoted spread was needed to identify truly tick-constrained securities.¹³⁰⁹ One commenter stated that adding additional criteria would decrease complexity as it would limit the number of stocks receiving a smaller tick size, and would prevent stocks from bouncing back and forth between tick regimes.¹³¹⁰ The Commission agrees with commenters that the quoted spread is sufficient to determine whether a stock is tick-constrained as a matter of principle but acknowledges that not all stocks receiving the lower tick size will react in the same manner to the tick size. The Commission has considered commenters' views regarding variables other than quoted spread, and has conducted additional, supplemental analysis, presented in this section.

Commenters' suggestions for additional variables fell into three broad categories. The most common type of suggestion involved a depth measure, with commenters questioning whether a

¹²⁹⁸ See *The Tick Size Debate Revisited* attached to MEMX Letter at 64–70. The appendix of the study indicates that the reverse split caused transaction costs to fall by more than 40% for tick-constrained ETPs, with some ETPs experiencing cost reductions of 80%. The study further indicates at 66 that similar results, “can be achieved by amending the tick regime to simply allow more granular prices, without the need to change the price of the security in question.”

¹²⁹⁹ Nasdaq Letter I at 8 provides some empirical analysis suggesting that 2 to 3 or maybe 2 to 4 ticks intra-spread is optimal. Pragma Letter at 1 uses data from stock splits to suggest that 1.5 to 4 ticks is optimal and that more than 4 is too many. RBC Letter at 3 cites research that 2 ticks intra-spread is optimal. CCMR Letter at 23 cites academic research suggesting 2 ticks intra-spread may be optimal. XTX Markets Letter at 4 suggests 2 to 4 ticks intra-spread as optimal. MMI Letter at 5 suggests 3–9 as optimal. IEX Letter I at 14 states for 2 to 4 ticks intra-spread. Budish Letter at 5 indicating that two or fewer is too few and suggesting that 2 to 4 may be reasonable. Harris Letter at 7 suggesting 2 ticks intra-spread.

¹³⁰⁰ See Barardehi et al., *supra* note 231.

¹³⁰¹ *Id.*

¹³⁰² One commenter stated that at 4 or more ticks intra-spread hidden orders become more prevalent which can harm market quality. See IEX Letter I at 12. However, the smaller tick size implemented by the Rule will not result in 4 or more ticks for the associated stocks and so, even if true, the effect suggested by the commenter is unlikely to play a large role in market quality because the rule will not result in 4 or more ticks intra-spread for stocks receiving the \$0.005 tick size.

¹³⁰³ Other commenters expressing support for a \$0.005 tick for stocks with narrow quoted spreads include Schwab Letter II at 6, STA Letter at 7, XTX Letter at 4.

¹³⁰⁴ See Mitre Corp. Letter at 5.

¹³⁰⁵ See IEX Letter I at 14.

¹³⁰⁶ *Id.*

¹³⁰⁷ *Id.*

¹³⁰⁸ See, e.g., Budish Letter at 4 and Harris Letter at 7.

¹³⁰⁹ See, e.g., T. Rowe Price Letter at 4, NYSE Letter I at 3, BlackRock Letter at 5, Citadel Letter I at 30. Optiver Letter at 1, 2. See also *infra* section VII.F.1.a for additional analysis of these alternatives.

¹³¹⁰ See Citadel Letter II at 4. The Commission considers the effect of stocks moving between tick size regimes in section VII.D.1.d, *infra*.

stock with a narrow-quoted spread was actually tick-constrained if the sizes of the quotes were small.¹³¹¹ Others suggested metrics based on trading volume.¹³¹² Another commenter suggested price as a measure of tick constraint.¹³¹³

Some commenters stated that even stocks with the narrow quoted spread may not benefit from a smaller tick unless other criteria were met.¹³¹⁴ For example, commenters stated that reducing the tick size for stocks that have narrow quoted spreads, but low depth, could lead to pennyning which could harm market quality.¹³¹⁵ Another commenter stated that if there is insufficient depth, a narrower tick size could harm market quality by fragmenting liquidity over multiple price levels—even if quoted spreads are tight.¹³¹⁶ Another commenter didn't articulate specific mechanism by which harms that might arise due to failing to take into account other criteria, but encouraged the Commission to take a "pragmatic approach" starting with a narrow set of "truly tick-constrained stocks" as defined by multiple criteria.¹³¹⁷

As discussed above, quoted spread reflects supply and demand forces in the market for liquidity provision. Many of the concerns of commenters regarding a smaller tick would be expressed by wider quoted spreads; for example, pennyning could potentially reduce incentives for liquidity provision, raising quoted spreads. This argues in favor of quoted spread as the main criterion. Furthermore, it is unlikely that a stock which trades near \$0.01 nearly all the time does so at random and would continue to do so even if unconstrained. It is more likely that a

stock trading with a quoted spread at the minimum pricing increment nearly all the time does so because the stock would trade with a narrower spread if that was possible, but the minimum quoting increment constrains the spread. Finally, quoted spread is correlated with depth, volume, and price.¹³¹⁸ For these reasons, it is likely that stocks with narrower quoted spreads will also have relatively high depth, and volume, and have lower prices. However, to fully address commenters' concerns, the Commission has provided additional, supplemental analysis that examines whether there is meaningful variation of the effect of a reduction of tick size within those stocks that have lower quoted spreads.

Specifically, the analysis presented in table 9 explores the question of whether stocks with similarly narrow quoted spreads respond differently to the TSP tick size change when conditioning on other factors suggested by commenters, such as depth, volume, or price. In sum, our analysis does not find evidence supporting the hypothesis that a narrower tick size is likely to harm stocks when considering criteria such as depth, volume, or price in addition to the quoted spread. Instead, our analysis suggests that across most market quality metrics stocks with high and low price, volume, or depth respond in a similar magnitude and direction to the same tick size change. For some market quality metrics, one subset of stocks may not have a statistically significant response to the tick size change. However, in no cases do we observe that stocks with high or low price, volume, or depth respond in opposite directions with magnitudes that are statistically significant. Thus, we find no evidence of a benefit from adding criteria to the tick size determination that would compensate for the considerably greater complexity that such an addition would cause.

The analysis presented in table 9 builds on the TSP analysis considered above, with a few modifications.¹³¹⁹ First, for brevity, we only report findings for bin 1 and bin 2 stocks—*i.e.*, those stocks with narrower quoted spreads—because the final Rule will similarly only affect stocks with less than 2 ticks intra-spread.¹³²⁰ We also

only present quantile regressions. We obtain daily regular hours trading volume, value weighted average price, and depth at the NBBO information from WRDS Intraday indicators for all trading days in May and June 2018. We divide bin 1 and bin 2 stocks into quartiles based on their average volume, price, or depth at the NBBO. The analysis uses quantile (median) regressions¹³²¹ to estimate the following difference-in-differences regression model separately for the high and low quartile samples:¹³²²

$$Y_{j,t} = \alpha_0 + \alpha_P \text{Pilot}_j + \alpha_E \text{Event}_t + \beta(\text{Pilot}_j \times \text{Event}_t) + \mu_{j,t}$$

By checking to see if market quality measures are affected differently for stocks with similarly narrow quoted spreads, but which have different depth, or price, or volume profiles, the analysis can show whether the effects of reducing the tick size depend on these additional characteristics in a manner that a quoted spread measure misses. The results are presented in table 9. Panel A presents the analysis that considers the effect of trading volume on a stock's response to a reduction in the tick size. The analysis sorts and subdivides the treated and control stocks separately by volume into quartiles, and it then performs regressions on the top and bottom quartile of stocks separately. Columns one and two present the results for stocks with TWAQS less than or equal to \$0.011, whereas Columns three and four present the results for stocks with TWAQS greater than \$0.011 but less than or equal to \$0.020. Columns one and three present the results for stocks in the bottom quartile of trading volume while columns two and four present the results for stocks in the highest quartile of trading volume. Panel B presents the

The first bin is for stocks with quoted spreads (\$0.00, \$0.06). The second bin is for stocks with quoted spreads in the range (\$0.06, \$0.09). The third bin is for stocks that had quoted spreads of (\$0.09, \$0.15) or approximately 2–3 ticks intra at a \$0.05 tick increment. The fourth bin is for stocks with quoted spreads greater than \$0.15.

¹³²¹ The primary advantage of quantile regressions is that they are less sensitive to outliers that can affect mean inference in OLS. Thus, median regressions provide additional robustness to the analysis and ensure that results are not driven by outliers.

¹³²² In this equation the variable Y denotes the response variable of interest such as quoted spread and depth. The subscripts j and t serve to index stocks and days respectively. α_0 , α_P , α_E , and β are coefficients (to be estimated), and $\mu_{j,t}$ is the error term. Pilot_j is an indicator variable that equals 1 if stock j was in the treatment group, or 0 if stock j was in the control group. Event_t is an indicator variable which is equal to 1 if the day t was post the treatment event and equals 0 otherwise. Table 8 reports the difference-in-differences estimator of β for a different response variable Y across the different quoted spread bins.

¹³¹¹ See, e.g., Invesco Letter at 3 suggesting that we consider whether a stock had multiple bids and offers at the NBBO. BlackRock Letter at 5 suggesting we consider Average Quoted Size. Citadel Letter I at 30 suggesting we consider average size at the NBBO/Daily volume. Cboe, State Street, et al. Letter at 2 and BlackRock Letter at 5 suggesting we consider quote size at the NBBO to average trade size, NYSE Letter I at 3 suggesting a quote stability measure of how long it takes the NBBO to return to pre-trade levels after a trade takes liquidity at the NBBO. T. Rowe Price Letter at 4 suggesting that depth could be measured by how many exchanges are currently quoting the NBBO.

¹³¹² See, e.g., BlackRock Letter at 5, Citadel Letter I at 30 (both suggesting trading volume as a measure of tick-constrained) and T. Rowe Price Letter at 4 (suggesting a turnover-based measure of tick-constrained).

¹³¹³ See BlackRock Letter at 5.

¹³¹⁴ See, e.g., Citadel Letter I at 5–6 and BlackRock Letter at 5, Invesco Letter at 3, Virtu Letter II at 17.

¹³¹⁵ See, e.g., Citadel Letter I at 5–6 and BlackRock Letter at 5.

¹³¹⁶ See Invesco Letter at 3.

¹³¹⁷ See Cboe Letter II at 2, 6.

¹³¹⁸ Using WRDS Intra Day Indicators Data for all stocks priced over \$5.00 without sym_suffix, the correlation between daily log quoted spread, log share volume, log price, and log average depth at the NBBO is $-.39$, $.35$, and $-.49$ respectively. See also Harris Letter at 7.

¹³¹⁹ See *supra* section VII.D.1.b.ii.

¹³²⁰ The Proposing Release analysis divided stocks into four bins based on their prevailing quoted spreads prior to the conclusion of the TSP.

same analysis as panel A but where stocks are sorted by price, and panel C does the same for depth at the NBBO.

We consider the differential effect of the TSP on depth, quoted spreads, effective

spreads, cancel-to-trade ratio, share of odd-lot volume, and realized spread.

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Table 9: TSP Analysis Conditional on Volume, Price, and Depth at the NBBO

Panel A: Trading Volume

Quoted Spread Bin # Volume	TWAQS ≤ \$0.06		\$0.06 < TWAQS ≤ \$0.09	
	Low	High	Low	High
Depth (100 shares)	-0.95*** (-11.81)	-1.24*** (-22.45)	- (-8.58)	-0.87*** (-16.01)
Depth (\$1,000)	-9.66*** (-5.03)	-24.9*** (-8.89)	- (-5.10)	-12.8*** (-7.43)
Quoted Spread (\$)	-0.021*** (-4.51)	-0.037*** (-23.01)	-0.0097 (-0.72)	-0.035*** (-6.57)
Relative quoted Spread	- 0.0055*** (-3.71)	- 0.0044*** (-7.58)	- 0.00064 (-0.39)	-0.0012 (-1.41)
Effective spread (\$)	-0.028 (-1.24)	-0.039*** (-3.49)	0.015 (0.29)	0.027 (0.76)
Relative effective spread	-0.0037 0.0049*** (-0.92)	- 0.0049*** (-3.43)	0.0079 (0.83)	0.00059 (0.91)
Cancel-to-trade	-1.31 (-0.59)	9.54*** (6.67)	6.64** (2.35)	7.58*** (6.45)
Share of odd-lot volume	0.00058* * (2.07)	0.0018** * (8.82)	0.00068 (1.45)	0.0020** * (5.21)
Realized Spread	-0.013*** (-7.27)	-0.013*** (-23.69)	-0.0049 (-1.13)	- (-7.39)
Relative Realized Spread	- 0.0034*** (-5.59)	- 0.0016*** (-5.34)	- 0.000061 (-0.08)	0.000100 (0.29)

Panel B: VWAP

Quoted Spread Bin #	TWAQS ≤ \$0.06		\$0.06 < TWAQS ≤ \$0.09	
	Low	High	Low	High
Price				
Depth (100 shares)	-1.13*** (-12.70)	-1.15*** (-30.31)	- (-6.22)	-0.70*** (-24.81)
Depth (\$1,000)	-12.0*** (-5.81)	-19.3*** (-11.28)	-2.74* (-1.87)	-10.6*** (-10.04)
Quoted Spread (\$)	-0.026*** (-7.76)	-0.039*** (-10.35)	-0.012 (-1.21)	-0.031*** (-6.21)
Relative quoted Spread	-0.010*** (-6.65)	-0.0014*** (-4.50)	-0.0012 (-0.61)	- (-4.74)
Effective spread (\$)	0.0064*** (-5.70)	-0.056*** (-3.79)	-0.013 (-0.24)	-0.0020 (-0.05)
Relative effective spread	-0.0030 (-0.99)	-0.0026*** (-4.09)	0.0053 (0.57)	-0.00083 (-0.80)
Cancel-to-trade	-1.90 (-0.94)	11.4*** (8.21)	4.87* (1.81)	6.66*** (6.11)
Share of odd-lot volume	0.00058** * (3.05)	0.0029*** (9.98)	0.00076 (1.55)	0.0013*** (3.42)
Realized Spread	-0.016*** (-14.61)	-0.014*** (-22.63)	-0.0062 (-1.59)	-0.011*** (-11.31)
Relative Realized Spread	- 0.0057*** (-9.15)	- 0.00066*** (-16.55)	- 0.00035 (-0.38)	- 0.00022*** (-12.28)

Panel C: Depth at NBBO

Quoted Spread Bin # Depth at the NBBO	TWAQS ≤ \$0.06		\$0.06 < TWAQS ≤ \$0.09	
	Low	High	Low	High
Depth (100 shares)	-	-1.38***	-	-0.76***
	1.02***		0.62***	
	(-20.53)	(-18.62)	(-21.27)	(-7.94)
Depth (\$1,000)	-	-26.4***	-	-9.26***
	10.4***		7.67***	
	(-9.46)	(-7.33)	(-16.76)	(-3.39)
Quoted Spread (\$)	-	-	-	-0.021**
	0.031***	0.032***	0.014**	
	(-6.24)	(-15.74)	(-2.44)	(-2.11)
Relative quoted	-	-	-	-0.0026
Spread	0.00072	0.0098***	0.00015	
	(-1.15)	(-8.28)	(-0.55)	(-1.27)
Effective spread (\$)	-	-0.031**	0.0049	-0.021
	0.038***			
	(-3.37)	(-2.11)	(0.41)	(-0.39)
Relative effective	-	-	-	0.0055
	0.0022***	0.0078**	0.00020	
	(-5.18)	(-2.05)	(-1.47)	(0.60)
Cancel-to-trade	5.83***	1.81	4.79***	6.10**
	(4.35)	(1.25)	(3.03)	(2.50)
Share of odd-lot	0.0028*	0.00097	0.0014*	0.0015***
	**	***	**	
	(9.02)	(4.66)	(3.42)	(3.42)
Realized Spread	-	-	-	-0.0082**
	0.012***	0.016***	0.0072***	
	(-8.60)	(-21.26)	(-5.60)	(-2.33)
Relative Realized	-	-	-	-0.00046
	0.00074***	0.0046***	0.00013*	
	(-5.69)	(-7.87)	(-1.76)	(-0.50)

* Panel A presents results for the sample sorted on trading volume, panel B presents the results for price, and panel C presents the results for depth at the NBBO. Within each bin, stocks are sorted based on their average trading volume, price, and depth at the NBBO during May and June 2018. Each regression is estimated using quantile (median) regressions. The 3 tables – one for each panel – present the effects of a reduction in minimum tick size from \$0.05 to \$0.01 cent on various quoting and trading outcome variables. A difference-in-differences regression with no control variables is estimated using data covering Control, Test Group 2, and Test Group 3 TSP stocks from 08/01/2018 – 11/30/2018. All observations are at the stock day level. The same model is used for all outcome variables. For each outcome variable Y_{jt} , the table presents only the difference-in-differences coefficient estimates that indicate the effect of the TSP on the dependent variable. The outcome variables are: Depth (\$1,000) is dollar value of depth at the NBBO measured in \$1,000s. The quoted spread refers to the distance between the NBBO midpoint and the NBBO quote. The effective spread is the distance between the NBBO midpoint and the realized trade price; the realized spread is the distance between a future NBBO midpoint (5-minutes ahead) and the trade price. Relative spread measures are calculated as the spread scaled by the NBBO midpoint. The cancel-to-trade ratio is the daily number of order cancellations divided by the number of trades, for displayed orders. The odd-lot rate is the percentage of trades in a day which executed against an odd-lot quote. Share of odd-lot volume is the odd-lot rate reported in WRDS Intra Day Indicators and equals $100 * (\text{Odd lot Messages}) / (\text{Trades for Odd lots})$. Similar to the analysis in table 8, stocks are divided into quoted spread bins based on average quoted spreads during May-June of 2018. Results are presented for only bin 1 and bin 2 stocks; see *supra* note 1234 for details on bin assignment. Regressions on the highest and lowest quartiles within each bin are performed; cells are darkly shaded if the regression estimates differ in sign between the highest and lowest quartiles within a bin, and cells are lightly shaded if the regression estimates agree in sign and in statistical significance between the highest and lowest quartiles within a bin. Depth (100 shares) is number of shares available at the NBBO in 100s. All data are Winsorized at the 1% and 99% level. The numbers in the () parentheses reflect t-statistics that are based on two-way stock-and-date clustered standard errors. Symbols *, **, and *** reflect statistical significance at 10%, 5%, and 1% type-1 error levels.

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The results show that in most cases that there is relatively little disagreement in terms of how low and high characteristic stocks respond to the TSP. In panel A, which presents results sorted based on trading volume, 10 out of the 20 pairs of regressions agree on both sign and statistical significance. A pair refers to the high and low quartile group for the same market quality outcome and the same quoted spread group—e.g., columns one and two are a pair, and three and four are a pair. This means that in 10 out of the 20 regression pairs run, high and low trading volume stocks had market quality responses to the change in the tick size that were in the same direction and were statistically different from zero. A further 8 out of the 20 pairs agree on sign, but not statistical magnitude. This means that while the point estimators from the regressions indicate that both high and low volume stocks had market quality responses in the same direction, either one or both groups experienced an effect that could not be measured to be

statistically different from zero.¹³²³ Lastly, only 2 out of 20 pairs disagree on sign, but there are no cases where both effects reject the hypothesis of no effect. This means that while the coefficients for the effect of the reduction in the tick size on high and low volume stocks disagree in the direction of the effect, in at least one case the effect is not statistically distinguishable from zero.

The story is similar for panel B which presents results for price. 11 out of 20 regression pairs agree on sign and statistical significance. A further 7 out of 20 agree on the sign of the effect though not necessarily statistical significance while only 2 out of 20 disagree on sign, but again in these cases neither result is statistically different from zero. Lastly in panel C, which presents results for the sort based on depth at the NBBO, 14 out of the 20 regression pairs agree on sign and

¹³²³ A result that is not statistically significant does not directly imply that there is no effect. Rather it implies that the test did not find enough evidence to overturn the hypothesis of no effect. This could be because (1) there is actually no effect, or (2) because the test did not have sufficient power to identify an existing effect.

statistical magnitude, 4 out of 20 agree on sign, but not statistical magnitude, and only 2 pairs disagree on sign, but in these cases neither regression provides a statistically significant result.

This analysis does not support the idea that failing to include price, volume, or depth-based criteria when determining which stocks receive a smaller tick size is likely to produce significant harm. In most cases, the analysis suggests that market quality is likely to respond similarly to a reduction in the tick size for stocks that are both high or low volume, price, or depth. It is possible that in some cases, some of the positive anticipated effects discussed above may be mitigated for certain subgroups of stocks. We fail to find evidence that certain subgroups of stocks will be significantly harmed by the amendments when only considering the time weighted quoted spread when assigning tick sizes.

c. Effect on Message Traffic and Market Data

One commenter stated that, since “reducing the minimum pricing increments for quotations” will result in “significantly more quotation

increments within a penny-wide spread for a given security,” these amendments will “significantly increase the capacity requirements for market participants to process these additional quotation messages.”¹³²⁴ Specifically the commenters stated that the additional message traffic could impact CAT costs which they state was not analyzed by the Commission.¹³²⁵

Commenters also stated that increased message traffic can increase market participants’ technological needs in terms of computing and processing requirements.¹³²⁶ Some commenters stated that more message traffic could slow down markets as it would take more time for market participants to process the increased data, this could in turn disrupt trading strategies.¹³²⁷ Another commenter stated that increased message traffic would lead to increased technology costs in terms of server, processor, and storage requirements needed to deal with increased message traffic.¹³²⁸ One commenter stated that significant increases in message traffic can cause technological difficulties for the exchanges.¹³²⁹ Another commenter stated that increased message traffic would give an advantage to sophisticated algorithmic traders who have a greater capacity to manage the cost of the data and could better apply the data itself.¹³³⁰

The Commission recognizes the potential for these costs articulated by the commenters, and considers the information provided. However, the Commission expects these effects, including the effect on CAT costs, to be mild. This conclusion stems from experience in options markets, which, as discussed above, experience considerably more message traffic than equity markets without significant adverse effects.¹³³¹ It also stems from research provided by commenters that gives a framework for estimating the increase in message traffic and the costs of such an increase which will now be discussed suggesting an estimated overall increase in technology costs to

market participants of approximately 1%, and an estimated increase in CAT costs of approximately \$4.1 million.

The amendments add one additional tick intra-spread for some stocks. The Commission expects the increase in message traffic from this increase to be mild. One commenter referenced research performed by one of the exchanges suggesting that each additional tick intra-spread adds 20% to message traffic.¹³³² This research suggests message traffic could increase 20% for stocks receiving the smaller tick size. The Commission expects 74% of share volume to receive the smaller tick, and the remaining share volume to be unchanged by the amendments. Multiplying 74% by 20% suggests that, based on the information provided by commenter, it is reasonable to believe total message traffic may increase by about 15% due to the amendments.

Accordingly, the costs associated with this increased message traffic on most market participants are expected to be relatively small. One commenter estimated that the proposed rule would lead to an increase in total infrastructure costs of 10% due to increased message traffic.¹³³³ Using the above methodology we estimate that if the proposal would have led to an increase in message traffic related costs of 10%, as suggested by the commenter, and if the costs of message traffic are proportional to the increase in message traffic, then by this reasoning, the adopted amendments, which create fewer ticks, will be associated with an increased infrastructure costs of approximately 1%.¹³³⁴ Additionally, another exchange,

commenting on the Proposing Release which had more and smaller ticks than the adopted amendments, estimated that the increase in message traffic due to the proposal would be relatively small compared to historical variation.¹³³⁵

Commenters asked the Commission to estimate the effect of the tick size reduction on CAT costs via the mechanism of increased message traffic.¹³³⁶ The fourth quarter 2023 CAT cloud hosting services costs were \$30.47 million,¹³³⁷ or \$121.88 million if annualized. Further, a recent order approving an amendment to the NMS plan governing CAT stated that equity message traffic accounted for 23% of total CAT message traffic (with options traffic accounting for the remainder).¹³³⁸ Thus, estimated CAT costs associated with equity message traffic equal \$121.88 million * 23% = \$28.03 million. Under the assumption that CAT costs are linear in message traffic,¹³³⁹ an

sizes based on 2023 data suggests that approximately 50% of trading volume would have received the \$0.001 tick, approximately 25% of trading volume would have been associated with the \$0.002. Combining these figures suggests that message traffic associated with the proposal would have increased approximately 125%. Thus, if a 125% increase in message traffic is expected to be associated with a 10% increase in infrastructure costs, then assuming that costs are proportional to message traffic, then a 15% increase in message traffic will be associated with just over a 1% increase in infrastructure costs associated with the amended Rule.

¹³³⁵ See NYSE Letter II at 10–11.

¹³³⁶ See FIF Letter at 10–12, SIFMA Letter II at 43.

¹³³⁷ See Consolidated Audit Trail, LLC, 2023 Financial and Operating Budget, available at <https://www.catnmsplan.com/sites/default/files/2024-01/01.17.24-CAT-Q4-2023-Budget-vs-Actual.pdf>.

¹³³⁸ See SEC, *Joint Industry Plan; Order Approving an Amendment to the National Market System Plan Governing the Consolidated Audit Trail; Notice* (Joint Industry Plan), Securities Exchange Act Release No. 98290 (Sep. 6, 2023), 88 FR 62628 (Sep. 12, 2023) at 62680 and n.1077.

¹³³⁹ The relation between total CAT cost and volume is complex and driven by both volume and the complexity of processing the additional information and may not always be linear. See Letter from Brandon Becker, Chair, CAT NMS Plan Operating Comm., to Vanessa Countryman, Sec’y, SEC at 3 n.11 (Mar. 27, 2024), available at <https://catnmsplan.com/sites/default/files/2024-03/03.27.24-Proposed-CAT-NMS-Plan-Amendment-Cost-Savings-Amendment.pdf>. However, one commenter speaking generically about server and technology cost associated with message traffic stated that these costs were “proportional to the increase in message traffic.” See FIF Letter at 9. Consequently, there is uncertainty regarding the exact relation between CAT costs and equity message traffic. However, to facilitate estimates of the effect of the amendments on CAT costs, the Commission makes the assumption that CAT costs are linear in message traffic—knowing that there is uncertainty regarding the exact relation. However, without some assumption about the relation between CAT costs and message traffic, no inference could be made. To the extent that CAT costs are convex or concave—rather than linear—in message traffic then the actual costs associated

¹³²⁴ See SIFMA Letter II at 21, stating that it is concerned about the impact of the amendments on “consolidated market data, capacity costs and CAT data requirements.”

¹³²⁵ See SIFMA Letter II at 21, 43; see also Citadel Letter II at 4–5 and FIF Letter at 10–12.

¹³²⁶ See, e.g., BlackRock Letter at 5, GTS Letter at 5, FIF Letter at 1, 6–8, RBC Letter at 4, IBKR Letter at 5, Fidelity Letter at 17.

¹³²⁷ See Tradeweb Letter at 2.

¹³²⁸ See STA Letter at 6.

¹³²⁹ See Budish Letter at 5.

¹³³⁰ See, e.g., Goldman Sachs Letter at 8 and RBC Letter at 4.

¹³³¹ See discussion surrounding *supra* notes 239 to 250.

¹³³² See FIF Letter at 7 referencing Phil Mackintosh, *More Ticks, More Messages* (Oct. 27, 2022), available at <https://www.nasdaq.com/articles/more-ticks-more-messages>. The research provided by the exchange provided three data points, the baseline case with no increase in ticks, a 1:5 increase and a 1:10 increase which are associated with 0%, 100% and 500% increase in message traffic. If message traffic is the variable on the vertical axis and the tick size change the horizontal axis, then all three of these data points fall on the line. Substituting in the number 1, to indicate the number of ticks added intra-spread yields an increase in message traffic of 1.2, or a 20% increase.

¹³³³ See Fidelity Letter at 17.

¹³³⁴ The proposal would have added 9 ticks for the stocks receiving the \$0.001 tick size, 4 ticks for the stocks receiving the \$0.002 tick size, and 1 additional tick for the stocks receiving the 0.005 tick. Using the methodology provided by the commenters suggesting that each additional tick would increase message traffic 20% relative to the baseline suggests that stocks receiving the \$0.001 tick would have an estimated message traffic increase of 180%, for stocks receiving the \$0.002 tick the estimated increase in message traffic would be 80%, and for stocks receiving that \$0.005 tick the increase in message traffic would be 20%. Using the same methodology as used to create table 7 to estimate the amount of trading volume that would have been associated with each of the proposed tick

increase in equity message traffic of 15% would correspond to an increase in CAT costs according to the following formula: \$28.03 million * 15% (expected increase in message traffic) ≈ \$4.1 million. Based on this data, we estimate CAT costs would increase by an estimated \$4.1 million per year due to increased equity message traffic associated with the smaller tick size. The CAT NMS Plan requires participants and industry members to fund the CAT. The funding model for the CAT NMS Plan allocates the costs to fund CAT among participants and the members of a national securities exchange or a member of a national securities association.¹³⁴⁰

Commenters stated that a smaller tick size will fragment liquidity in the order book and reduce the displayed liquidity at the NBBO, which in turn reduces the information about liquidity available in the market for market participants who do not receive depth of book information from proprietary data feeds.¹³⁴¹ These commenters stated that this could increase reliance on and the subsequent cost of proprietary data products due to the increased need for the data and simply due to additional data points.

The Commission acknowledges that, in addition to lowering transaction costs, the amendments will likely also spread depth across more price points in the limit order book and reduce depth at the NBBO in some stocks with a 0.5 cent tick, which could increase the complexity and cost associated with sourcing liquidity for larger orders.¹³⁴² However, the inclusion of odd-lot information in consolidated market data is anticipated to help to mitigate this effect, and the eventual inclusion of depth of book information in consolidated market data due to the implementation of the MDI Rules should also help mitigate this effect.¹³⁴³

with the amendments would be higher or lower than what is estimated here.

¹³⁴⁰ See Joint Industry Plan, *supra* note 1338.

¹³⁴¹ See Citadel Letter I at 8, Virtu Letter II at 8, 10, Citigroup Letter at 4, SIFMA Letter II at 41–42, and Lewis Letter attached to Virtu Letter II at p 35. See also Lewis Letter attached to Virtu Letter II at 33 (pointing out that the need to manage increased message traffic could lead proprietary data feed to become more expensive independent of market participant reliance such data products). SRO fees are subject to the rule filing process under Exchange Act section 19(b) and Rule 19b–4. 15 U.S.C. 78s(b); 17 CFR 240.19b–4.

¹³⁴² See *supra* section VII.D.1.b.i (discussing the smaller tick size fragmenting depth across more price levels).

¹³⁴³ After the MDI Rules are implemented, consolidated market data is expected to contain depth information for five price levels beyond the NBBO, which will help mitigate the effects of a reduction in displayed depth at the NBBO from a reduction in tick size. See MDI Adopting Release,

Fragmentation of liquidity in the limit order book will increase the precision and usefulness of information about depth of book quotes and odd-lot quotes inside the NBBO for some stocks with a 0.5 cent tick because orders in these stocks will be displayed at half-penny increments rather than at penny increments, which provides more precise information.¹³⁴⁴ This will increase demand for depth of book data, which could cause more market participants that currently only subscribe to SIP data to purchase exchange proprietary depth of book feeds. It could also cause some market participants that only subscribe to SIP data and who previously would not have purchased MDI depth of book data or odd-lot information to decide to purchase one or both of these MDI data elements when they become available. The Commission acknowledges that the amendments could increase the cost associated with producing exchange proprietary data feeds and MDI data, but the cost increases may not be significant.¹³⁴⁵ Any changes in the prices of exchange proprietary data feeds would be subject to the SRO fee filing process.¹³⁴⁶

After the MDI Rules are fully implemented, commenters stated that the amendments could decrease the benefits of MDI data, which will include depth of book data for prices with quotes that are five levels outside of the NBBO.¹³⁴⁷ The tick reduction will likely alter the information in MDI data for some stocks with a 0.5 cent tick, making MDI depth of book data less informative while increasing the informativeness of MDI odd-lot information. The tick reduction may generally result in MDI depth of book data showing information on fewer shares in the order book for some stocks with a 0.5 cent tick. More specifically, it may no longer include some information on orders that are \$0.03 to \$0.05 away from the NBBO in

supra note 10, at 18625–30 and 18755–59 for further discussions on the content and effects of MDI depth of book data.

¹³⁴⁴ This could increase the usefulness of both exchange proprietary depth of book feeds and MDI odd-lot information and depth of book data relative to SIP data for stocks with a 0.5 cent tick. However, as discussed below, the usefulness of MDI depth of book data in comparison to exchange proprietary depth of book data may decrease for these stocks.

¹³⁴⁵ See *supra* note 1334 and accompanying text (estimating increased infrastructure costs of approximately 1% due to an increase in message traffic).

¹³⁴⁶ SRO fees are subject to the rule filing process under Section 19(b) and Rule 19b–4. 15 U.S.C. 78s(b); 17 CFR 240.19b–4.

¹³⁴⁷ SIFMA Letter II at 41–42 stated that the Rule, by making NMS data under MDI less competitive with proprietary feeds, will offset some of the benefits of the MDI Rules.

some stocks with a 0.5 cent tick.¹³⁴⁸ However, the effects of the loss of this information may not be significant because the MDI depth of book data would still show five round lot price levels of depth and many market participants may not need more than five levels of depth of book information.¹³⁴⁹ Additionally, for stocks with a 0.5 cent tick, information about depth within \$0.025 of the NBBO may be more valuable than information about depth that is deeper in the book (e.g., between \$0.03 and \$0.05 of the NBBO), because only a relatively small portion of marketable orders execute at prices outside the NBBO.¹³⁵⁰ Further, for stocks that have the \$0.005 tick, MDI odd-lot information about odd-lots inside the NBBO will likely be more valuable because it will show these odd-lots on a finer grid—as long as the NBBO spread is \$0.01 or more, the tick reduction allows investors using MDI NMS data to see odd-lots at finer half-penny increments. For stocks that retain the one cent tick size, the tick size amendments are unlikely to affect the informativeness of MDI depth of book data or odd-lot information because the amendments are unlikely to change the trading environment, including odd-lot quotes inside the NBBO and depth in the limit order book.¹³⁵¹

Commenters stated that reducing the tick size would make MDI data less competitive with exchange proprietary data feeds.¹³⁵² The tick reduction may

¹³⁴⁸ The MDI NMS data includes information on five round lot price levels outside the NBBO. The tick reduction implies that the levels may be \$0.005 apart from each other; without the tick reduction, the levels would be at least \$0.01 apart. Therefore, the tick reduction may result in five levels that cover orders that are \$0.025 outside the NBBO, whereas without the tick reduction the five levels would cover orders that are \$0.05 outside the NBBO. It is possible that MDI NMS data will include depth that is greater than \$0.025 outside the NBBO for stocks receiving a tick reduction—this is because each displayed level is required to comprise at least one round lot worth of shares, and odd-lot orders will be aggregated with other orders to form a level with a sufficient number of shares (with the displayed price equaling the least competitive price among the aggregated orders). That is, if there is not enough liquidity at a given price point within \$0.025 of the NBBO, then a price point further outside the NBBO will be displayed.

¹³⁴⁹ See MDI Adopting Release, *supra* note 10, at 18625 nn.387, 388 (discussing levels of depth used in order routing and analysis finding that a significant percentage of the total notional value of all depth of book quotations for both liquid and illiquid stocks falls within the first five price levels).

¹³⁵⁰ See MDI Adopting Release, *supra* note 10, at 18731 (discussing analysis showing that only a small percentage of orders execute outside the NBBO).

¹³⁵¹ See *supra* section VII.D.1.

¹³⁵² See, e.g., SIFMA Letter II at 41–42 and Citadel Letter I at 8.

cause some market participants that currently utilize exchange proprietary depth of book feeds, and would have replaced them with MDI depth of book data and odd-lot information if it was available at a lower cost,¹³⁵³ to no longer substitute MDI depth of book data and odd-lot information for proprietary feeds.¹³⁵⁴ Proprietary feeds will likely gain certain advantages over MDI depth of book data as a result of the tick reduction. First, self-aggregators and competing consolidators relying on MDI depth of book data may not be able to provide information on depth for orders that are between \$0.03 and \$0.05 away from the NBBO for some stocks that have been assigned a \$0.005 tick size because the MDI depth of book data only provides data on depth at 5 round lot price levels. Second, in cases where there is insufficient liquidity at a given price level to form a round lot due to the reduction in the tick spreading liquidity out across more levels, self-aggregators and competing consolidators relying on MDI depth of book data will not be able to provide information on depth at each price point beyond the NBBO, but will rather only have information on liquidity that is aggregated over multiple price points to compose a round lot; proprietary feeds, on the other hand, can offer information on available liquidity at each price point. These two advantages may lead some market participants that would have substituted MDI depth of book data for exchange proprietary depth of book data, if it was available at a lower cost once it was implemented, not to do so due to the tick reduction. To the extent this occurs, it would result in a transfer from competing consolidators and the market participants who would have substituted MDI depth of book data for their proprietary feeds to exchanges, because these market participants will continue paying, and exchanges will

¹³⁵³ In the MDI Adopting Release, the Commission stated that it believes that the total fees for the equivalent of consolidated market data are likely to decline because of the MDI Rules, but recognizes uncertainty about how the effective national market system plan(s) will set the fees for data content underlying consolidated market data offerings and how SROs will set the fees for connectivity necessary to receive the data content underlying consolidated market data as well as how the competing consolidators will price their services. See MDI Adopting Release, *supra* note 10, at 18772.

¹³⁵⁴ This would apply to both market participants that would have self-aggregated the MDI depth of book data and odd-lot information or purchased it from a competing consolidator. See MDI Adopting Release, *supra* note 10, at 18793–95 for discussions on market participants substituting consolidated market data for exchange proprietary feeds. However, as discussed above, demand for MDI depth of book data could increase for market participants that currently rely on SIP data.

continue to receive revenue, for their proprietary data feeds.¹³⁵⁵ On the other hand, to the extent that the tick size reduction increases the usefulness and demand for depth of book data—as discussed above—some market participants that currently rely on SIP data may be able to satisfy their increased data needs by purchasing MDI odd-lot information and depth of book data from a competing consolidator once the MDI rules are implemented.¹³⁵⁶

d. Analysis of the Length of Evaluation and Operative Periods

The adopted amendments specify three-time periods that govern tick assignment.¹³⁵⁷ First are the periods that a new tick size is operative. The adopted rules update the tick size twice a year, so they set this period at six months. Second, the rules set the ticks based on two backward-looking three-month Evaluation Periods over which NMS stocks' TWAQS is measured; if the TWAQS is at or below \$0.015 during this Evaluation Period, then the stock will be assigned a half-penny tick. Otherwise, it will receive a penny tick. Finally, there is a one-month gap between the Evaluation Period and the initiation of the subsequent tick size. The January through March Evaluation Period will determine the tick for the May through October operative period. Likewise, the July through September Evaluation Period will determine the tick for November through April of the subsequent calendar year.

Commenters highlighted a tradeoff with respect to the proposed backward-looking evaluation period. On one hand, a short period “uses the period immediately closest in time to measure securities’ behavior to ensure that tick-constrained names are selected using

¹³⁵⁵ See MDI Adopting Release, *supra* note 10, at 18793–95 for discussions on market participants substituting consolidated market data for exchange proprietary feeds and related transfers.

¹³⁵⁶ See *infra* section VII.D.4.b for additional discussions of why low latency traders may not substitute odd-lot information from the exclusive SIPs for exchange proprietary feeds.

¹³⁵⁷ See 17 CFR 242.612(a)(1), defining the evaluation period to assign a tick size as “(i) the three months from January through March of a calendar year and (ii) the three months from July through September of a calendar year during which the Time Weighted Average Quoted Spread of an NMS stock shall be measured by the primary listing exchange to determine the minimum pricing increment for each NMS stock,” and 17 CFR 242.612(b)(1), and specifying the pricing increment will be operative “(i) the first business day of May for the Evaluation Period from January through March and continue through the last business day of October of the calendar year, and (ii) the first business day of November for the Evaluation Period from July through September and continue through the last business day of April of the next calendar year.”

the most recent and relevant basis”¹³⁵⁸ On the other hand, a short period may place too much emphasis on idiosyncratic and unrepresentative events.¹³⁵⁹

Commenters also highlighted a tradeoff regarding the proposed length of the operative period. Frequent updating will allow tick assignment to more quickly react to changes in the “market environment and individual stock behavior”;¹³⁶⁰ quicker updating would thereby “reduce how often and for how long a stock’s tick size stays outside the optimal range.”¹³⁶¹ However, more frequent updating may impose costs in terms of adjustments to algorithms, operations, trading models and systems,¹³⁶² customer complaints,¹³⁶³ and tick size oscillation.¹³⁶⁴

Commenters also discussed the importance of a gap between the proposed evaluation period and the beginning of the subsequent tick size to give industry time to update systems and avoid disruptions.¹³⁶⁵ The proposal did not include a gap between the evaluation period and the subsequent tick size, so the Commission has evaluated the tradeoffs in response to commenters’ concerns.

The Commission acknowledges, as it did in the Proposing Release,¹³⁶⁶ that quoted spreads are not static from day to day. It is possible that a stock could have a narrow quoted spread during an evaluation period, and thus be assigned a \$0.005 tick, and then during the following operative period it could experience points in time where the quoted spread is much wider.¹³⁶⁷

¹³⁵⁸ See NYSE Letter I at 4.

¹³⁵⁹ See FIA PTG Letter II at 2, Optiver Letter at 2, and MMI Letter at 6.

¹³⁶⁰ See NYSE Letter I at 4.

¹³⁶¹ See Pragma Letter at 6.

¹³⁶² See FIA PTG Letter II at 2, UBS Letter at 13, Citigroup Letter at 2, BlackRock Letter at 9, Hudson River Letter at 3, JPMorgan Letter at 4, Morgan Stanley Letter at 3, State Street Letter at 3, and MMI Letter at 6.

¹³⁶³ See TradeStation Letter at 5.

¹³⁶⁴ See Mitre Corp. Letter at 5 and MEMX Letter at 16.

¹³⁶⁵ See RBC Letter at 3, T. Rowe Price Letter at 4, and IEX Letter I at 7. T. Rowe Price and IEX both suggested a 1-month gap. RBC suggested “an appropriate amount of time to be informed of any changes in order to implement them, and to minimize errors as much as possible.”

¹³⁶⁶ See Proposing Release, *supra* note 11, at 80324.

¹³⁶⁷ Likewise, two stocks with equal average quoted spreads may not be equally tick-constrained. For example, one stock with a \$0.02 average quoted spread could have a \$0.01 quoted spread 40% of the time while another has a \$0.01 quoted spread 10% of the time. The effect of the Rule on market quality could differ in much the same way as the effects described in this paragraph. Additionally, some commenters inquired about how stock splits and reverse splits would be handled; see SIFMA

Likewise, a stock could have a wide quoted spread during an evaluation period and therefore be assigned a \$0.01 tick, yet subsequently trade with a narrower spread such that a \$0.005 tick would be beneficial. The extent to which these outcomes occur will depend on the length of the evaluation period, the operative period, and the lag between the two.

The Commission evaluates the tradeoffs mentioned above by computing diagnostic statistics for many different combinations of evaluation and operative periods. The four panels of table 10 each present different diagnostics: panel A estimates the fraction of aggregate share volume that is misassigned to a tick of \$0.01, panel B estimates the fraction of aggregate share volume that is misassigned to a tick of \$0.005, panel C estimates the rates of false positives, and panel D estimates the rates of false negatives. Table 10 is similar to table 10 of the Proposing Release,¹³⁶⁸ which estimated in the context of the proposal the fraction of aggregate volume that would receive a tick reduction yet trade with too many intra-spread ticks during the subsequent three months. Table 10 herein extends this analysis by: computing a wider range of diagnostic statistics, computing the statistics on a rolling basis for a 4.5-year sample, computing the statistics for a wide variety of period lengths, and incorporating a one-month lag between the evaluation period and the implementation of the tick updates as provided for in the adopted amendments.

Each diagnostic in table 10 is computed for sixteen combinations of evaluation and operative periods—four evaluation period lengths, and four operative period lengths. The evaluation period lengths include: one month, three months (as suggested in the proposal and finalized in the adopted amendments), five months, and twelve months.¹³⁶⁹ The operative period

lengths include: one month, three months (as suggested in the proposal), six months (as in the adopted amendments), and twelve months.¹³⁷⁰ The calculations incorporate a one-month lag between the evaluation period and the implementation of the updated tick size—which was not part of the proposal but is part of the adopted amendments. Further, each diagnostic is computed for every month from January of 2018 to June of 2022. That is, the Commission simulates the tick assignment procedure on a rolling basis for every month of the 4.5-year sample and computes the diagnostics at every month.¹³⁷¹ Each diagnostic is therefore computed under each of the sixteen combinations of periods and for each of the 54 months in the sample, for a total of 864 calculations per diagnostic. The panels in table 10 summarize the diagnostics over the 54 months and present a single number for each of the sixteen combinations of periods.

The diagnostics computed in table 10 are subject to the following caveat: they are estimated from historical data in which the access fee cap was set at 30 mils, and stocks were constrained by the \$0.01 tick. The amendments will reduce the access fee cap to 10 mils for all stocks and will reduce the tick to \$0.005 for stocks that maintain a TWAQS at or below \$0.015 during the evaluation period. These changes are likely to have two opposing effects on quoted spreads: the reduction in the access fee cap will put upward pressure on quoted spreads,

the analysis here considers five-month evaluation period specifically so that the evaluation period would not encompass two tick regimes when combined with a six-month operative period and a one month lagged implementation. For example, consider the six-month operative period spanning May to October (which includes a one month lagged implementation); the next six-month evaluation period would span April to September, thus including two distinct tick regimes. The five-month evaluation period would only span May to September, which is wholly contained in the most recent operative period. An evaluation period that encompasses two tick regimes may be less informative of the appropriateness of the current tick assignment; therefore, table 10 uses a five-month evaluation period instead of a six-month evaluation period.

¹³⁷⁰ The operative periods were chosen to cover a range of intervals, and to fit evenly into a twelve-month calendar year. In this way, any changes to the tick size would occur in the same month(s) of each year.

¹³⁷¹ For example, suppose the month is April 2018. To compute the statistics for an evaluation length of three months and an operative length of six months, the tick size for May 2018 through August 2018 is set by the symbol's TWAQS from January 2018 through March 2018. The statistics in the table are determined by symbols' trading during the May 2018 through August 2018 period (the operative period). This process is repeated for every month from January 2018 to June 2022, and the table summarizes results across all months.

while the reduction in the tick will allow quoted spreads to fall below \$0.01 for some NMS stocks.¹³⁷²

This caveat implies that the estimates in table 10 will be systematically different from the same statistics calculated with realized data—*i.e.*, data after the rule is implemented. However, the purpose of the analysis in table 10 is to detect patterns in how the diagnostics vary across combinations of evaluation and operative periods. These patterns are likely to be robust to the aforementioned caveat. For example, suppose the reduction in the access fee cap causes a stock's quoted spread to widen by 20 mils; this effect would occur whether the Evaluation Period is three months or twelve months, and whether the operative period is one month or six months, etc. Therefore, table 10 can still inform the choice of evaluation and operative period. The subsequent discussion of table 10 will further highlight when a diagnostic may be over- or under-estimated.

Panel A of table 10 estimates the fraction of aggregate share volume that is misassigned to a tick size of \$0.01. A stock's volume is misassigned to a penny tick if its average TWAQS is above \$0.015 during the most recent evaluation period, yet trades with a TWAQS below \$0.015 in the operative period. This trading volume would have benefited from a lower tick of \$0.005 in those subsequent months and is therefore considered a false negative. The fraction of aggregate share volume that is a false negative is reported in panel A. Further, this fraction is reported for every combination of evaluation period and operative period.

Looking at the false negatives in panel A, the table demonstrates that shorter periods tend to reduce the percent of volume that is misassigned to a \$0.01 tick. One can pick any evaluation length shown in the table (1, 3, 5, or 12). For that evaluation length, the fraction of aggregate share volume that occurs with a \$0.01 tick and maintains a TWAQS at or below \$0.015 is increasing in the operative period. In other words, more frequent updating provides greater benefits, on average, for any choice of evaluation period. For example, an evaluation period of 3 months with a 1-month operative period will misassign 9.4% of trading volume to a tick of \$0.01; if the same evaluation period is used but the tick is updated annually, then the fraction of misassigned trading increases to 12.9%. Similarly, one can

¹³⁷² See *supra* section VII.D.1.b.ii for a discussion of the effect of the reduction in the tick on quoted spreads, and section VII.D.2 for a discussion of the effect of the reduction in the access fee cap on quoted spreads.

Letter II at 42 and Virtu Letter II at 18. Stock splits and reverse splits can mechanically affect the bid-ask quoted spread and are not considered in the evaluation periods, thus it is possible that a stock could temporarily be misassigned to a tick size due to a split or reverse split. These effects would be temporary and would rectify in the next evaluation period. See *supra* section III.C.8 for further discussions of how tick sizes are assigned following a stock split or reverse split.

¹³⁶⁸ See *supra* note 11, at 80324.

¹³⁶⁹ The evaluation periods in this analysis were chosen to cover a range of time periods for both the evaluation period and the operative effective period suggested by commenters who suggested time horizons ranging from monthly updating to annual updating, see, e.g., Pragma Letter at 6, BlackRock Letter at 9, FIA PTG at 2, UBS at 13. Although commenters suggested 6-month evaluation periods,

pick any column corresponding to the operative period (1, 3, 6, or 12) and observe that the prevalence of false negatives is increasing with the length of the evaluation period. These patterns are consistent with commenters' views that more recent (and relevant) data tend to increase the benefits of the amendments.

A tick size can be misassigned in a second way: a stock may be assigned a tick of \$0.005 yet end up trading with an average quoted spread over \$0.015. This trading volume may not fully benefit from the lower tick and is therefore considered a false positive. If the quoted spread widens sufficiently, relative to the quote, then the stock could trade in a range of ticks intra-spread that may harm market quality.¹³⁷³ The fraction of aggregate volume that is a false positive is reported in panel B of table 10 for every combination of evaluation period and operative period. This is analogous to table 10 of the Proposing Release, but with a quoted spread threshold of \$0.015 instead of 10 or 15 ticks to align with the adopted amendments.

Panel B shows that, for the adopted rule choices of a 3-month Evaluation Period and a 6-month operative period, 3.4% of share volume will receive a \$0.005 tick yet trade in an environment with an TWAQS over \$0.015. It is possible that the reduction in the tick size could cause a worse trading environment for some of this fraction of trading volume, compared to what the trading environment could have been had the stock retained a \$0.01 tick. This effect will not be indefinite because, if a stock's quoted spread remains elevated, then at the end of the next evaluation period the stock will be assigned a wider tick—mitigating the negative consequences of having a tick size that is too narrow relative the quoted spread.

The false positive statistics in panel B of table 10 further show that less frequent tick updating tends to result in more volume trading with a smaller tick yet a relatively wide quoted spread. This can be seen by the increased prevalence of false positives as one moves left-to-right along a row—for any chosen evaluation period, a longer

operative period results in more volume trading at a low-tick yet relatively wide quoted spread. This pattern is consistent with commenters' views that more frequent updating is better at adapting to changing market trends and stock behavior. Similarly, moving down any given column shows that increasing the evaluation period tends to reduce the amount of volume in low-tick stocks with wide quoted spreads; this pattern is consistent with commenters' views that short evaluation periods may, in some circumstances, assign stocks to the \$0.005 tick on the basis of transient events, and that these stocks may not be able to sustain the tick reduction.

The estimates of false positives in panel B of table 10 are likely to be over-estimates for two reasons. First, the threshold for tick misassignment is chosen at a quoted spread of \$0.015, which corresponds to three intra-spread ticks. The above analysis on the Tick Size Pilot indicates that the trading environment does not deteriorate until the number of intra-spread ticks is well above three. Hence, the chosen threshold is conservative. Second, and as previously discussed, the estimates in panel B are constructed from historical data in which stocks were constrained by the \$0.01 tick. Once these amendments are implemented the stocks assigned a \$0.005 tick will be able to trade at quoted spreads below \$0.01; this will have a mechanical effect of lowering the stocks' TWAQS and thereby keeping more volume under the \$0.015 quoted spread threshold.

By comparing the magnitudes of the false negatives and false positives in panels A and B of table 10, we can assess the relative importance of the two ways in which a tick may be misassigned. The false negatives are generally substantially larger and exhibit greater variation within the table.¹³⁷⁴ This implies that the incremental effect of the choice of period length will be greater for the share of volume that is misassigned to a \$0.01 tick than for volume that is misassigned to a \$0.005 tick. For example, the difference between the highest and lowest fraction of false negatives is 12.3%—this is the increase in aggregate share volume at a misassigned \$0.01 tick when moving from 1-month periods to 12-month periods—while the difference between the highest and lowest fraction of false

positives is only 1.8% of aggregate share volume.¹³⁷⁵

An advantage of panels A and B of table 10 is that they estimate the prevalence of false negatives and positives as fractions of aggregate share volume; these panels therefore show the amount of aggregate trading that is misassigned to a tick. A disadvantage of panels A and B is that they do not condition on the aggregate level of quoted spreads. Some combinations of evaluation and operative periods may do relatively well when aggregate quoted spreads are high, and some combinations may do better when aggregate quoted spreads are low.¹³⁷⁶

Panel C and D of table 10 address the aforementioned disadvantage of panels A and B by estimating rates of false negatives and positives. The false negative rate conditions on the amount of low-quoted spread volume, while the false positive rate conditions on the amount of high-quoted spread volume.¹³⁷⁷ Specifically, the rate of false negatives is measured as the amount of share volume that occurs with a tick of \$0.01 and a TWAQS under \$0.015, divided by the total amount of share volume that occurs with a TWAQS under \$0.015. Analogously, the rate of false positives is measured as the amount of share volume that occurs with a tick of \$0.005 and a TWAQS over \$0.015, divided by the total amount of share volume that

¹³⁷⁵ The greater prevalence of false negatives may be due to the existing \$0.01 tick size effectively censoring the observed quoted spreads at the penny tick. For symbols near the \$0.015 threshold, the prevalence of false positives and negatives should be approximately equal—i.e., a symbol with a quoted spread of \$0.0149 is as likely to cross over the \$0.015 threshold (and be a false positive) as a symbol with a quoted spread of \$0.0151 is likely to cross under the \$0.015 threshold (and be a false negative). When we move away from the threshold, however, the low-tick symbols are more likely to be constrained by the penny tick—if we see a TWAQS of \$0.012, the true market-clearing quoted spread—i.e., unconstrained by the minimum tick—is likely lower than \$0.012 because the TWAQS is censored at \$0.01; if we see a TWAQS of \$0.018, however, this censoring is less important. Therefore, the likelihood that a symbol with a TWAQS of \$0.012 crosses over the \$0.015 threshold (and is recorded as a false positive) is lower than the likelihood that a symbol with a TWAQS of \$0.018 crosses under the \$0.015 threshold (and is recorded as a false negative).

¹³⁷⁶ To take an extreme example, suppose every stock's quoted spread increases by \$0.10 immediately after new ticks are assigned. This implies that no stock should have a tick of \$0.005. In this case, the evaluation and operative periods that assign the least amount of trading to the \$0.005 would do best. Conversely, suppose that quoted spreads fall by half immediately after new ticks are assigned; in this case, the periods that assign more trading to the \$0.005 tick would generally do better.

¹³⁷⁷ In the statistics and medicine literature, the false positive rate is related to a test's specificity, while a false negative rate is related to a test's sensitivity.

¹³⁷³ The empirical analysis in section VII.D.1.b.ii, suggesting that a lower tick size benefits tick-constrained stocks, is an "on average" result. While the Commission expects that a lower tick would on average decrease transaction costs for tick-constrained stocks, the Commission cannot rule out the possibility that for some of these stocks, a smaller tick could lead to wider quoted spreads. For these stocks, if quoted spreads increase to a sufficient degree, then the stock could be re-assigned a wider tick after the next evaluation period.

¹³⁷⁴ If false positives are over-estimated, as discussed in the previous paragraph, then the relative importance of false negatives becomes greater still.

occurs with a TWAQS over \$0.015. In the context of the evaluation period, a low false negative rate signifies effective identification of stocks that would benefit from a tick reduction, while a low false positive rate suggests effective avoidance of assigning a reduced tick to stocks that would not benefit from it. In contrast to panels A and B, patterns in panels C and D of table 10 are likely to be more robust to market-wide changes in quoted spreads.

Panel C of table 10 presents results for the false negative rates across 16 combinations of evaluation periods and operative periods. The pattern for false negative rates is similar to the fraction of share volume inappropriately assigned a \$0.01 tick in panel A—as the period lengths shorten, the false negative rates decrease. For example, an evaluation period of 3 months with monthly updating typically fails to assign a tick reduction to 12.8% of volume that would benefit from it. If the same evaluation period is used but the

tick is updated annually, then the rule would fail to assign a tick reduction to 19.3% of volume that would benefit from it. The pattern holds moving down columns and moving across rows from shorter to longer periods. This lends support to commenters' views that more recent data—from shorter evaluation periods and more frequent updating—tends to do a better job at assigning a low tick to stocks that will benefit from it in the operative period.

False positive rates are reported in panel D. The pattern for false positive rates is consistent with results in panel B on the fraction of volume inappropriately assigned a \$0.005 tick—shorter evaluation periods and longer operative periods tend to have higher false positive rates, indicating that more trading is potentially harmed from having too narrow of a tick. For every column, the highest false positive rate occurs with an evaluation length of 1 month, and the lowest false positive rate occurs with an evaluation length of 12

months. This indicates that short evaluation periods may put more weight on transient events, as some commenters stated. Similarly, for every row the false positive rate is highest with an operative period of 12 months, and the rate is lowest with an operative period of 1 month. This indicates that infrequent updating increases the risk that a stock is stuck at an inappropriately low tick for many months.

The contrasting patterns in the rates of false positives and negatives illustrates a tradeoff highlighted by commenters (and discussed at the beginning of this section). A short evaluation period uses the most recent and relevant information, which on average reduces the false negative rate; however, a short evaluation period also places more emphasis on short-term and volatile events, which raises the false positive rate.

TABLE 10—EFFECT OF THE EVALUATION PERIOD ON INAPPROPRIATE TICK ASSIGNMENT

	Length of operative period in months			
	1 (%)	3 (%)	6 (%)	12 (%)
Panel A: Fraction of aggregate share volume assigned a \$0.01 tick with a subsequent TWAQS below \$0.015 (i.e., false negatives)				
Length of evaluation period in months:				
1	8.5	9.4	10.7	12.9
3	11.4	12.4	13.7	15.8
5	13.1	14.1	15.3	17.3
12	17.0	17.8	18.9	20.8
Panel B: Fraction of aggregate share volume assigned a \$0.005 tick with a subsequent TWAQS above \$0.015 (i.e., false positives)				
Length of operative period in months:				
1	3.1	3.3	3.8	4.3
3	2.6	2.9	3.4	3.8
5	2.6	2.9	3.2	3.6
12	2.5	2.7	2.9	3.2
Panel C: False negative rates				
Length of operative period in months:				
1	12.8	14.2	16.2	19.3
3	17.4	18.8	20.6	23.6
5	19.9	21.2	23.0	25.9
12	25.7	26.9	28.6	31.2
Panel D: False positive rates				
Length of operative period in months:				
1	8.5	9.4	10.9	12.6
3	7.2	8.2	9.6	11.2
5	7.1	8.1	9.3	10.6
12	6.8	7.5	8.4	9.5

^aFor every month from January 2018 to June 2022, the Commission simulates the tick assignment procedure under 16 combinations of evaluation and operative period lengths. The evaluation period determines the number of prior months to use when averaging each stock's quoted spread; a TWAQS of \$0.015 or below during the evaluation period causes the stock to receive a tick of \$0.005 during the subsequent tick assignment interval. The operative period determines the length of each tick assignment.

All the statistics in the tables are computed using data beginning one month after the evaluation period. For example, suppose the month is April 2018. To compute the statistics for an evaluation length of 3 months and an operative length of 6 months, the tick size for May 2018 through August 2018 is set by the stock's TWAQS from January 2018 through March 2018. The statistics in the table are determined by stocks' trading during the May 2018 through August 2018 period (the operative period). This process is repeated on a rolling basis for every month from January 2018 to June 2022, and the table summarizes results across all months.

TWAQS is determined by computing the time weighted quoted spread during regular trading hours as computed by the WRDS intra-day indicators for every sym_root and sym_suffix combination in the dataset. When calculating a stock's TWAQS during an evaluation period, the stock's daily TWAQS is averaged across all trading days in the evaluation period.

When assigning volume to a TWAQS bucket in an operative period, the TWAQS on a given day for a particular stock is used. That is, if a stock trades with a TWAQS of \$0.011 on Monday but the same stock has a TWAQS of \$0.016 on Tuesday, then its volume on Monday is assigned to the sub-\$0.015 category while its Tuesday volume is assigned to the over-\$0.015 category in the operative period.

The universe of securities in the WRDS intra-day indicators dataset is used.

Panel A computes the fraction of total aggregate share volume that occurs in stocks that would have been assigned a \$0.01 tick yet subsequently trade at a TWAQS of under \$0.015 in the operative period. These stocks would benefit from a \$0.005 tick instead of a \$0.01 tick.

Panel B computes the fraction of total aggregate share volume that occurs in stocks that would have been assigned a \$0.005 tick yet subsequently trade at a TWAQS of over \$0.015 in the operative period. These stocks may not benefit from the \$0.005 tick.

Panel C computes false negative rates. The false negative rate is the fraction of share volume that is assigned a tick of \$0.01 among the share volume that trades with a TWAQS under \$0.015 in the operative period.

Panel D computes the false positive rates. The false positive rate is the fraction of share volume that is assigned a tick of \$0.005 among the share volume that trades with a TWAQS above \$0.015 in the operative period.

Table 11 further explores commenters' discussions about the risk of placing too much emphasis on transient market conditions. In particular, panels A and B of table 11 computes rates of false negatives and positives—similar to panels C and D of table 10—but does so using only the evaluation period that ends with March of 2020. The one-month evaluation period includes only March of 2020; the three-month evaluation period covers January to March of 2020; the five-month evaluation period covers November of 2019 to March of 2020; the twelve-month evaluation period covers April of 2019 to March of 2020. In this way, panels A and B of table 11 demonstrate what may happen if an unusual market event causes an inappropriate tick assignment. These panels show that a one-month evaluation period performs particularly poorly when that month is March of 2020. Specifically, the one-month evaluation period exhibits a substantially higher false negative rate.¹³⁷⁸ A three-month evaluation period consistently has the lowest false negative rate—it has the benefit of recent data without an over-reliance on short-term fluctuations. Finally, the false positive rates in panel B approximately double when moving from a six-month operative period to a twelve-month operative period, indicating that infrequent tick updating can lead to stocks getting stuck with an inappropriately low tick for an extended period.

Panels A and B of table 11 add to our understanding of the tradeoff presented by the evaluation period. Table 10 suggests that short evaluation periods tend to reduce false negatives but increase false positives. Given that false negatives (vs. false positives) tend to be more prevalent and vary more across evaluation periods, table 10 suggests

that a one-month evaluation period may be best. However, table 11 shows that a one-month evaluation period may substantially increase false negatives when the evaluation period includes a period of unusual market stress.

While panels A and B of table 11 includes March of 2020 in the evaluation period, one commenter also provided, in the context of the Proposing Release, analysis using March of 2020 in the operative period. This commenter stated that during times of market stress, “many symbols would be trading with far more price levels intra-spread than contemplated under the Proposal, thereby further increasing the liquidity-related harms . . .” The commenter further showed that, were the proposed rule in effect, most symbols receiving a tick reduction would have experienced over ten intra-spread ticks during March of 2020, and many stocks would have experienced over twenty intra-spread ticks.¹³⁷⁹

The Commission acknowledges that quoted spreads generally widen during periods of market stress, and this may result in stocks trading with more intra-spread ticks than is desirable; the rise in intra-spread ticks may then compound the market stress. Relative to the proposal, the amendments reduce the severity of such an outcome by reducing the number of stocks that receive a tick reduction, and by reducing the size of the tick reduction. To further examine this issue, the Commission conducts its own analysis with March of 2020 as the operative period. In particular, the Commission simulates tick assignment in February of 2020 under the parameters of the amendments, and then examines the outcome during March of 2020. The simulation is done for a range of evaluation periods—a one-month evaluation period uses January of 2020 to determine which stocks receive the \$0.005 tick in March (allowing for a one-month lag), a three-month evaluation period uses November of

2019 to January 2020 to assign ticks, a five-month evaluation period uses September of 2019 to January 2020, and a twelve-month evaluation period uses February of 2019 to January 2020. The Commission then examines the fraction of aggregate share volume that would have received a \$0.005 tick under the amendments yet traded with a wide quoted spread during an operative period of March 2020.

Results are presented in panel C of table 11. Each row corresponds to an evaluation length of 1, 3, 5, or 12 months. Each column corresponds to a quoted spread threshold of \$0.015, \$0.02, or \$0.05. The upper-left number—21.4%—indicates that 21.4% of aggregate share volume in March of 2020 would have occurred with a \$0.005 tick and a TWAQS over \$0.015. With a three-month evaluation period, this fraction halves to 10.6%, further reinforcing the conclusion of panel A that a one-month evaluation period may do particularly poorly when market conditions suddenly worsen. The Commission further reiterates that stocks receiving a \$0.005 tick are unlikely to be harmed when trading at a quoted spread of \$0.015, so it is unlikely that 10.6% of share volume would have been harmed in March of 2020 were the amendments in place. To further explore this issue, the Commission performs similar calculations with wider quoted spread thresholds of \$0.02 and \$0.05. With a three-month evaluation period, the fraction of aggregate share trading that receives a \$0.005 tick and trades at a quoted spread over \$0.02 is 6.4%; this reduction (from 10.6% trading at a quoted spread over \$0.015) indicates that a substantial proportion of the false positive trading during March of 2020 is occurring with 3–4 intra-spread ticks, which is generally in line with commenters' views on the optimal number of intra-spread ticks.¹³⁸⁰

¹³⁷⁸ The false positive rates are generally lower than usual (e.g., below those in Panel B), likely because quoted spreads narrowed after March of 2020.

¹³⁷⁹ See Citadel Letter I at 6–7.

¹³⁸⁰ See *supra* note 1299.

Finally, with a three-month evaluation period, the fraction of aggregate trading that receives a \$0.005 tick and trades at

a quoted spread over \$0.05 is 1.2%. Analysis in the Proposing Release and herein suggests that this 1.2% of volume

is at an increased risk of a reduction in market quality due to having over ten intra-spread ticks.¹³⁸¹

TABLE 11—EFFECT OF THE EVALUATION PERIOD ON INAPPROPRIATE TICK ASSIGNMENT AROUND MARCH 2020

	Length of operative period in months			
	1 (%)	3 (%)	6 (%)	12 (%)
Panel A: False negative rates using March of 2020 in the evaluation period				
Length of evaluation period in months:				
1	36.2	35.4	37.4	40.1
3	21.7	22.5	23.7	23.9
5	34.7	34.9	36.1	37.4
12	30.0	31.7	32.0	33.9
Panel B: False positive rates using March of 2020 in the evaluation period				
Length of operative period in months:				
1	1.7	2.6	3.2	8.0
3	3.0	4.6	6.0	12.0
5	2.6	4.1	5.4	10.2
12	3.6	5.0	6.5	11.0
Panel C: Fraction of March 2020 share volume with a \$0.005 tick and wide quoted spreads				
	Quoted spread threshold			
	AQS > \$0.015 (%)	AQS > \$0.02 (%)	AQS > \$0.05 (%)	
Length of evaluation period in months:				
1	21.4	14.4	3.5	
3	10.6	6.4	1.2	
5	12.4	7.6	1.5	
12	14.4	9.2	2.0	

^a The Commission simulates the tick assignment procedure under 16 combinations of evaluation and operative period lengths. The methodology and data used for this simulation is described in the note to table 10.

In contrast to table 10, which performed the simulation on a rolling basis for every month from January 2018 to June 2022, this table only simulates tick assignment and outcomes around March of 2020.

Panel A repeats the false positive calculations of table 10 as if the tick is assigned in April 2020 (to ensure that March 2020 is in the evaluation period). For example, to compute the statistic for an evaluation length of 3 months and an operative length of 6 months, the tick size for May 2020 through August 2020 is set by the stock's TWAQS from January 2020 through March 2020. April 2020 is the hypothetical month in which the tick assignment is calculated and acts as the gap between the evaluation period and the operative period. Panel B similarly repeats the false negative calculations of table 10 as if April 2020 is the month in which the tick assignment is calculated.

Panel C instead uses March 2020 as the operative period. For example, to compute the statistic for an evaluation length of 3 months, the tick size for March 2020 is assigned by the stock's TWAQS from November 2019 to January 2020, with February of 2020 being the hypothetical month in which the tick assignment is calculated. Panel C computes the fraction of total aggregate share volume that occurs in stocks assigned to a \$0.005 tick, yet trades at a high TWAQS during March of 2020. The fraction is calculated using a range of TWAQS thresholds for trading during March of 2020—the columns correspond to trading with a TWAQS over \$0.015, \$0.02, and \$0.05.

The analysis indicates that a shorter operative period almost always results in fewer errors. By updating the tick more frequently, the tick better reflects changing market conditions—this is shown by increasing rates of both false negatives and positives as the operative period widens.¹³⁸² However,

commenters stated that more frequent updates may impose costs in terms of adjustments to algorithms, operations, systems, and an increase in customer complaints. One commenter requested that the Commission “investigate historical rates of change in the TWAS for a variety of trading symbols. This

would avoid imposing undue costs on market participants that may be caused by tick size updates that are too frequent but should mitigate the possibility that tick sizes do not update frequently enough and lead to worse trading outcomes.”¹³⁸³

¹³⁸¹ See *supra* section VII.D.1.b.ii, particularly figure 2 and surrounding discussion.

¹³⁸² In panels A–D of table 10 and panels A–B of table 11, moving left-to-right along any row results

in a monotonic increase in both false positives and false negatives. The only exception to this pattern is in Panel A of table 11: with an evaluation period of one-month, the false negative rate falls by 0.8%

when the operative period increases from one to three months.

¹³⁸³ See Mitre Corp. Letter at 5.

The Commission examines the frequency of tick size updates in table 12. This table shows the typical number of tick-changes that occur in a 12-month period under each combination of evaluation and operative period length.¹³⁸⁴ Shorter operative periods present a tradeoff, they better tailor the tick size to current conditions for the stock which can improve market quality for the stock, but they impose two costs: first, a shorter operative period implies

ticks are updated more frequently during a year, which increases the number of discrete system changes that market participants need to make. Second, a shorter operative period increases the number of tick-changes that stocks experience during a typical twelve-month period—this is seen in table 12 by the increase in tick changes as one moves right-to-left in any row. More tick changes may result in result in more extensive changes to trading

algorithms and may increase customer confusion and complaints. The risk of customer confusion is mitigated by the adoption of a tick size indicator in the regulatory data. This indicator can be directly incorporated into trading algorithms helping to automate the process adjusting trading strategies to different tick sizes for algorithmic traders.¹³⁸⁵

TABLE 12—EFFECT OF THE EVALUATION PERIOD ON THE MEDIAN NUMBER OF TICK CHANGES OVER A 12-MONTH PERIOD ^A

	Length of operative period in months			
	1	3	6	12
Length of evaluation period in months:				
1	4,722	2,317	1,356	665
3	2,632	1,969	1,253	653
5	1,724	1,435	1,153	622
12	772	680	591	488

^a The Commission simulates the tick assignment procedure under 16 combinations of evaluation and operative period lengths. The simulation is performed on a rolling basis for every month from January 2018 to June 2022. The methodology and data used for this simulation is described in the note to table 10. This table computes the number of tick changes that occur over a median 12-month horizon for each combination of evaluation and operative period length.

To summarize the results of this subsection, tables 10, 11, and 12 illustrate the tradeoffs inherent in the choice of evaluation and operative periods. With respect to the evaluation period, table 10 implies that shorter period lengths reduce false negatives but increase false positives; the higher prevalence of false negatives tilts the scale toward a short evaluation period. Table 11, though, shows that a one-month evaluation period may unduly increase the influence of aberrant events, while a three-month evaluation period continues to perform well in unusual market conditions.

With respect to the operative period, tables 10 and 11 imply that shorter period lengths reduce both false negatives and positives. Table 11 shows a particularly large reduction in false positives when using a six-month operative period instead of a twelve-month period. Focusing on an evaluation period of three-months, tables 10 and 11 show similar error rates with operative period of three and six months. However, a three-month

operative period requires market participants to update their systems twice as often as a six-month period, and table 12 shows that the number of annual tick changes increases 57% when moving from the six-month to the three-month period.¹³⁸⁶ The amendments, which adopt a three-month Evaluation Period and a six-month operative period, reflect these considerations.¹³⁸⁷

Finally, the Commission examined the effect of a one-month lag between the end of the evaluation period and the subsequent tick assignment. All the results in tables 10, 11, and 12 include this one-month lag; the Commission separately calculated table 10 statistics without the lag. If the lag is removed, then the error rates in panels A and B of table 10 fall by a small amount across all combinations of evaluation and operative periods. The lag effectively makes the evaluation period less informative about the operative period, and this effect is stronger when updates are made every month. With respect to magnitudes, removing the lag causes the

fraction of trading that is a false negative to decrease by an average of 0.9% with a maximum decrease of 1.2% for the top left cell of panel A; the false positives in panel B likewise drop by an average of 0.2% when the lag is removed. On the other side of the scale, the lag may reduce operational burdens on market participants by allowing them time to update their systems before a new tick assignment occurs, and may likewise provide brokers time to give advance notice to customers about which stocks will experience tick changes.¹³⁸⁸ The amendments, which provide a one-month lag, reflect a conclusion that the cost of increased error rates due to the one-month lag is small relative to the benefits that the lag provides for industry testing and adjustment.

e. Additional Effects of a Half-Penny Tick

Some commenters suggested, in the context of the proposal, that a tiered tick size could create confusion in the markets particularly for retail traders.¹³⁸⁹ These commenters stated

¹³⁸⁴ These estimates of tick changes are likely to be over-estimates because the estimates are constructed from historical data in which stocks were constrained by the \$0.01 tick. Once the adopted tick amendment is implemented, the stocks assigned a \$0.005 tick will be able to trade at quoted spreads below \$0.01; this is expected to lower the stocks' TWAQS, thereby reducing the probability that a low-tick stock will experience a tick change by crossing over the \$0.015 TWAQS threshold. It is possible, however, that the amended rule's reduction in the access fee cap may cause quoted

spreads to widen, though transaction costs are not expected to go up, and thus shift the distribution of quoted spreads toward the \$0.015 threshold; if more stocks trade near the \$0.015 threshold, then there may be more switching as stocks move across the threshold more frequently.

¹³⁸⁵ See *infra* section VII.D.5 for additional discussion of the expected costs associated with the amendments to Rule 612.

¹³⁸⁶ With a three-month evaluation period, a six-month operative period results in 1,253 annual tick changes, while a three-month operative period

results in 1,969. The increase is therefore calculated as: $(1969 - 1253)/1253 = 57\%$.

¹³⁸⁷ See 17 CFR 242.612(a)(1), (b)(1) for rule text relating to these periods.

¹³⁸⁸ The adopted rule additionally syncs the dates of tick assignment with the dates of new round lot assignments. This further reduces operational burdens on market participants. See discussion in section VII.D.5.a.

¹³⁸⁹ Fidelity Letter at 3; Tastytrade Letter at 18–19.

that retail traders may be at a relative disadvantage because they may get confused by the sub-penny increments. One commenter presented data suggesting that retail traders tend not to use sub-penny non-marketable limit orders even when they can, for instance for orders priced below \$1.00, and that fill rates for such trades tend to go down for retail traders.¹³⁹⁰ The commenter ascribes these findings to retail investors getting confused and being unfamiliar with sub-penny trading increments leading to a competitive disadvantage for these traders with respect to more sophisticated traders that are more familiar with sub-penny increments and thus retail traders using non-marketable limit orders would be more likely to be undercut with a smaller tick.¹³⁹¹

Another commenter suggested that retail investor confusion would lead retail brokers to need to hire additional staff to manage customer confusion and education concerning multiple tick sizes, or to handle phone trades by retail customers confused by the markets.¹³⁹²

The Commission acknowledges some potential for confusion but does not expect the amendments to disadvantage retail traders. First, the comments are in response to the proposal; the adopted amendments have fewer minimum quoting increments than the proposed amendments; indeed, there are only two as opposed to four. Second, any confusion or disadvantage must be evaluated relative to the baseline. Currently the penny tick creates a price floor, which, especially for tick-constrained stocks, advantages faster and generally more sophisticated traders. It also creates incentives for more complex strategies such as those involving alternative venues, again, contributing to complexity and putting less sophisticated investors at a disadvantage. Third, the one-month period of time between measuring the TWAQS and the assigned tick size becoming operational will allow time for broker-dealers to educate customers about tick sizes.¹³⁹³ For these reasons, the half-penny tick is not expected to disadvantage retail traders.

One commenter requested that the Commission consider how a smaller tick size could affect stock splits.¹³⁹⁴ The commenter cited academic research suggesting that stock splits can be used

to affect the bid-ask spread.¹³⁹⁵ To the extent that issuers engage in stock splits to manage their quoted spread, this behavior is likely to continue under the amended rules when issuers believe that a stock split could improve their liquidity. However, the amendments are expected to improve liquidity on average for stocks subject to the smaller tick size, so it may be less likely that an issuer may feel the need to manage liquidity via stock splits going forward and so there could be fewer associated stock splits for this reason. Furthermore, although stock splits and reverse splits can mechanically affect the bid-ask quoted spread and change the optimal tick, the next evaluation period would rectify any misalignment in the stock's tick size assignment.¹³⁹⁶

Some commenters requested that the Commission provide an analysis of the effect of the amendments on the use of ISOs (intermarket sweep orders).¹³⁹⁷ Some stated that spreading liquidity over more price levels would increase the risk of information leakage with regards to a large order being split over many smaller orders which would lead to an increased complexity of implementing large orders and would thus lead to an increased use of ISO orders.¹³⁹⁸ Barardehi et al. (2022)¹³⁹⁹ specifically examine the effect of tick sizes on ISO activity. Their study finds that a narrower tick is associated with more ISO activity which the authors attribute to the increased market complexity associated with implementing trades in a narrower tick environment. This is consistent with the effect considered by the commenters. Consequently, ISO usage is likely to increase for stocks that receive the narrower tick size. One commenter stated that increased use of ISO orders may result in more locked and crossed markets.¹⁴⁰⁰ Research on the link between ISO usage and locked markets is scant. Increased ISO usage could eventually lead to an increase in locked and crossed markets, which could make transacting on exchanges more

complicated, however the magnitude of any effect is uncertain.

Another commenter specifically asked the Commission to consider the effect of a lower tick size on ETFs as opposed to stocks.¹⁴⁰¹ The commenter stated that ETFs tend to have larger trade sizes and also that the creation and redemption process for ETFs is unique. However, the commenter does not provide any analysis regarding how these differences would lead an ETF to react differently than a common stock to a reduction in the tick size.¹⁴⁰² The fundamental economics regarding the tick size tradeoff discussed at the beginning of this section applies to ETFs because the economics discussed in this section rely on the mechanics of quoting and trading, not on the assets underlying the stock or ETF. It is also unclear how the creation redemption process would differ from the analysis provided above. Additionally, the creation/redemption process also does not produce unique economics in the context of these amendments. This is because authorized participants purchasing the underlying shares to deliver in exchange for shares of the ETF or delivering shares of the ETF in exchange for the underlying assets would still need to purchase and sell the underlying shares in the stock market, subjecting them to the economics of supply and demand for liquidity provision for the stocks in question. Consequently, ETFs with narrower quoted spreads likely will experience an improvement in market quality with a \$0.005 tick size. To the extent that ETFs have larger average trade sizes the benefits of the Rule may be smaller, consistent with the analysis presented in Barardehi et al. (2022). But as the adopted amendment is more conservative than the proposed rule in that it applies a tick size of \$0.005 to stocks with quoted spreads equal to or less than \$0.015, the Commission does not believe, based on the analysis above and commenters evidence presented above, that the amendments are likely to harm ETFs that receive a tick size reduction.

One commenter stated that updated Rule 605 data would “question the validity of assumptions” made in the tick size proposal.¹⁴⁰³ The commenter stated that Rule 605 execution quality data for stocks that have quoted spreads wider than the tick would demonstrate that the minimum quoting increment is not the driver of off-exchange retail

¹³⁹⁰ See Fidelity Letter at 3.

¹³⁹¹ See also O'Brien Letter at 4 and Tastytrade Letter at 20 making similar comments.

¹³⁹² See Tastytrade Letter at 18–19.

¹³⁹³ See *supra* note 307 and surrounding text.

¹³⁹⁴ See CCMR Letter at 28–29.

¹³⁹⁵ See James J. Angel, *Tick Size, Share Prices and Stock Splits*, 52 J. Fin. 655 (1997), and Sida Li & Mao Ye, *supra* note 1286.

¹³⁹⁶ See *supra* section VII.C.1.c for additional discussion of tick sizes, quoted spreads, and stock splits. See *supra* note 1367 and *supra* section III.C.8 for discussions of how tick sizes are assigned following a stock split or reverse split.

¹³⁹⁷ See SIFMA Letter II at 34. See also 17 CFR 242.600(b)(47) (defining an intermarket sweep order).

¹³⁹⁸ See, e.g., Vanguard Letter at 5, Citigroup Letter at 4, and Virtu Letter II at 17.

¹³⁹⁹ See Barardehi et al., *supra* note 231.

¹⁴⁰⁰ See RBC Letter at 3.

¹⁴⁰¹ See Tradeweb Letter at 3.

¹⁴⁰² *Id.*

¹⁴⁰³ See Citadel Letter III at 1–2.

trading.¹⁴⁰⁴ The Commission agrees that there are other factors driving off-exchange retail trading, and adopts changes to Rule 612 for reasons other than a significant change in retail order flow. For this reason, additional information regarding retail execution quality that will arise from amended Rule 605 is not needed prior to adopting amendments to Rule 612.

One commenter stated that variable tick sizes “raise[] concerns about the ability to compare the execution quality for the stock across multiple months,” resulting in “a significant possibility of investor confusion when comparing Rule 605 reports across several months.”¹⁴⁰⁵ The Commission acknowledges that changes in the tick size may result in changes to the levels of some measures of execution quality that are sensitive to the tick size, such as price improvement, over time. To the extent that this reduces the interpretability of Rule 605 reports, particularly for stocks that experience frequent changes in the tick size, this could represent a cost of the amendments. However, there are several factors that will mitigate this potential cost. First, the adopted amendments include an operative period that limits the frequency at which a tick assignment is updated to a minimum of six months. The fact that a stock’s tick assignment cannot vary more frequently than every six months greatly reduces the number of potential changes in execution quality levels in monthly Rule 605 reports that result from changes to a stock’s tick size. Second, to the extent that market participants will be able to combine Rule 605 information with information about a stock’s historical tick size,¹⁴⁰⁶ this will allow them to control for this characteristic when assessing a stock’s execution quality data over time. In addition, as acknowledged by the commenter, a change in the tick size “may impact market centers and broker-dealers reporting under 605 in the same manner,”¹⁴⁰⁷ such that variations in the tick size (and the resulting mechanical effects on execution quality levels) will not impact the use of Rule 605 to

compare execution quality across reporting entities within a given month.

If FINRA chooses not to update Rule 5320 (the ‘Manning Rule’), the lower tick size could make claiming the price improvement exception to FINRA Rule 5320 harder for market participants since it would require a two-tick price improvement for some stocks instead of a one tick price improvement. One commenter stated that because the price improvement exception in the Manning Rule is currently tied to \$0.01 price improvement, a tick size smaller than \$0.01 would “greatly increase the cost and complexity of compliance and would likely disincentivize (or eliminate) the handling of customer limit orders by wholesale broker dealers.”¹⁴⁰⁸ The commenter made this statement specifically referencing the proposed \$0.001 tick increment. The adopted amendments do not include the \$0.001 tick size and so these concerns are significantly mitigated. Nonetheless, requiring two tick price improvement for some orders could increase the complexity associated with complying with the Manning Rule, particularly in situations where the quoted spread is only one tick wide because it would require more than crossing the quoted spread in order to claim the exception. For broker-dealers, such as wholesalers, whose business models center on internalizing customer orders within the NBBO, the requirement to, in some instances, more than cross the quoted spread in order to execute a customer order could be a disincentive to handling some orders as it could render such trades unprofitable.¹⁴⁰⁹

One commenter stated that a lower tick size could lead to oscillation in some stocks between tick sizes.¹⁴¹⁰ The commenter stated that a stock that falls just under the threshold and thus receives a smaller tick may be subject to more undercutting with the smaller tick size, which could cause quoted spreads to widen. Wider spreads would make the stock revert to the wider tick size, which would reduce undercutting so that quoted spreads would decline. A narrower spread could lead to a smaller tick in the next round and so on.¹⁴¹¹ The Commission believes that this outcome is unlikely given the analysis provided in this section. Stocks receiving the smaller tick size are expected to experience smaller quoted spreads due to the smaller tick size allowing pricing that better reflects

supply and demand. This effect would reduce oscillation. Stocks receiving the smaller tick size would likely experience tighter quoted spreads making it less likely that they would revert to the \$0.01 tick in the next evaluation period.

2. Lower Access Fee Cap

The amendments will lower the access fee cap from \$0.003 per share (30 mils) to \$0.001 per share (10 mils) for NMS stocks priced at \$1.00 or more, and from 0.3% to 0.1% of the share price for stocks with prices less than \$1.00. Lowering the access fee cap preserves price coherence,¹⁴¹² given changes to the tick size. Moreover, the Commission expects that lowering the access fee cap will result in lower transaction costs for investors. The Commission also expects that a lower access fee cap will result in wider quoted spreads; however, market quality will nonetheless improve. Lowering the access fee cap will reduce exchange transaction revenue due to lower capture on sub-\$1.00 stocks. We describe these effects in more detail below.

Commenters, with few exceptions,¹⁴¹³ agreed on the need for Commission action on access fees given the change in the tick size.¹⁴¹⁴ One commenter stated that in light of the reduction in ticks for some stocks to \$0.005, leaving the access fee cap at 30 mils would “distort trading economics in a manner that undermines the Commission’s goals for competition and Best Execution.”¹⁴¹⁵ Many commenters

¹⁴¹² See *infra* section VII.D.2.a

¹⁴¹³ Exceptions include e.g. Citigroup Letter at 6, and World Federation of Exchanges Letter at 4, Pragma Letter at 7, Hudson River Letter at 4, and Budish Letter at 6–7. However, these commenters did not present arguments suggesting that an access fee greater than 50% of the tick size would not cause price coherence problems. The Commission believes that retaining a 30 mil access fee for stocks trading with a \$0.005 tick would further separate the price from the economics of the trade and disrupt the coherence between nominal and net pricing as the access fee cap would be greater than 50% of the tick size.

¹⁴¹⁴ See, e.g., Nasdaq Letter I at 19 (stating “Nasdaq recognizes that if Commission action successfully updates tick sizes and narrows spreads for certain stocks, then existing exchange access fees and rebates may no longer be appropriate.”). See Cboe, State Street, et al. Letter at 3 (stating “We acknowledge that a reduction in quoting increments for tick constrained symbols could make it advisable for market centers to reduce access fees for the affected symbols to ensure a consistent equity market structure framework.”), see Better Markets Letter II at 3–4 (stating “A reduction in the minimum tick size without reducing access fees could permit fees to become a higher percentage of the minimum pricing increment, which would almost certainly undermine price transparency.”), and see RBC Letter at 4 (stating “If the MPIs are meaningfully reduced as noted in the Proposal, then access fees would need to be lower as well.”).

¹⁴¹⁵ Nasdaq Letter I at 19.

¹⁴⁰⁴ *Id.*

¹⁴⁰⁵ See SIFMA Letter II at 20–21.

¹⁴⁰⁶ While there is no requirement for the listing exchange to disseminate historical information about the tick size, it is likely that this information will be collected and disseminated by other market participants, such as firms providing services related to financial data and analysis because there would likely be demand for such data because, for example, it would be needed to perform after the fact transaction cost analysis.

¹⁴⁰⁷ See SIFMA Letter II.

¹⁴⁰⁸ See Citadel Letter I at 8.

¹⁴⁰⁹ See *supra* note 193 and surrounding text for further discussion.

¹⁴¹⁰ See Mitre Corp. Letter at 5.

¹⁴¹¹ *Id.*

supported a 10 mils access fee.¹⁴¹⁶ Some commenters went further, stating that the Commission should explore “comprehensive access fee reform” or ban rebates entirely.¹⁴¹⁷ Some commenters suggested what they viewed as a less extensive change, namely an alternative in which some stocks had a fee of 15 mils whereas others had a fee of 30 mils.¹⁴¹⁸ In short, while commenters agreed on the need for Commission action to lower the access fee cap, they disagreed regarding the specifics.

a. Coherence Between Net and Quoted Prices

In the Proposing Release, the Commission discussed the need to maintain an access fee cap that is less than half of the tick size due to the need to maintain coherence between net and quoted prices.¹⁴¹⁹ Commenters, with few exceptions,¹⁴²⁰ agreed.¹⁴²¹ Reducing the access fee cap to 10 mils will satisfy this condition of coherence. As explained in the Proposing Release, only the best posted price is protected. Under the current regulatory framework, leaving the access fee cap at 30 mils could preclude market participants from trading on exchanges that have the best displayed price when fees and rebates are included. Suppose a traditional exchange has a displayed protected bid at \$10.010, whereas an inverted exchange has a displayed protected bid at \$10.005. Order protection would

require the exchange to have policies and procedures in place reasonably designed to prevent trades from occurring at a price worse than the protected quote,¹⁴²² effectively requiring the investor to go to the traditional exchange if the investor wished to trade against a displayed, on exchange bid. However, on the traditional exchange, the investor demanding liquidity would take home \$10.007, whereas on the inverted exchange, the investor would take home \$10.008.¹⁴²³

Closely related to the lack of price coherence on exchanges is the effect on price transparency. To illustrate, consider a situation with an access fee and rebate of \$0.003 and a tick size of \$0.005. Consider the effect on prices of a stock. Suppose one sees a trade executed at a price of \$10.005 followed by another executed at a price of \$10.010. Many investors would interpret this as a sign that a stock was increasing in value. However, with an access fee of \$0.003, the net price of the first order if it represents a market order to buy is \$10.008 (the buyer pays \$10.005 + \$0.003), whereas the net price of the second order if it is a market order to sell, is \$10.007 (the seller receives \$10.010 and pays \$0.003 in fees). The price has fallen, not risen, an effect that only the most sophisticated market participants would be able to discern.¹⁴²⁴ Lowering the access fee cap to 10 mils would solve both of these problems.

b. Quantitative Net Capture Analysis

While the amendments do not directly dictate what rebates trading venues can offer, trading venues generally finance rebates through access fees, so in practice reducing the access fee cap will lower the rebates offered.¹⁴²⁵ If trading venues were to subsidize rebates by taking a net loss per share transacted, they would be vulnerable to experiencing extreme and

unpredictable losses if volumes spike. Such a trading venue could experience such losses if its non-transaction fee sources of revenue do not increase enough with a spike in trading volume to offset their negative net capture. Trading volumes can vary significantly through time, with little ability for a trading venue to predict the timing and magnitude of changes in trading volume. For example, in January 2021 volume spiked dramatically for certain stocks relative to pre-January 2021 levels.¹⁴²⁶ Exchanges could face financial hardship should rebates deviate substantially from fees; so it is unlikely that exchanges would take this risk. For this reason, rebates and the cap on access fees are tied together.

As explained in section VII.C.2.b, the Commission understands that the net capture for non-auction trading in stocks that have a price equal to or greater than \$1.00 is likely close to 2 mils for most exchanges. An exchange net capture rate of approximately 2 mils is in line with current pricing practices at most exchanges; it is reasonable to estimate that exchanges would realize a similar net capture rate because the current net capture rate will remain possible under the adopted amendments. The Commission acknowledges uncertainty over whether this 2 mils capture rate will persist or be different should trading venues choose to alter their business model in response to the change in access fees. The analysis that follows assumes that exchanges will maintain the practice of financing rebates through access fees, and thus for transactions in stocks priced \$1.00 or more the Commission expects the average access fee to be near the 10 mil access fee cap and the average rebate to be approximately 2 mils lower.¹⁴²⁷ The analysis also assumes that the behavior of inverted exchanges and off-exchange venues changes proportionally. Although the amendments would not require proportional change on the part of inverted venues, there is currently no restriction on the level of rebates for taking liquidity or fees for posting; yet, as shown in table 4 in section VII.C.2, inverted venues generally have fee and rebate levels similar to maker-taker

¹⁴¹⁶ See, e.g., BlackRock Letter at 10–11, BMO Letter at 3–4, Budish Letter, IEX Letters I–V, JPMorgan Letter at 6, NASAA Letter at 9, Vanguard Letter at 2 and 6, XTX Letter at 5.

¹⁴¹⁷ See We The Investors Letter I at 3–4 (recommending banning rebates); Harris Letter at 4 (recommending reverting to traditional fees, thereby effectively eliminating rebates). BlackRock Letter at 11 states “Although we believe that the current proposal may miss an opportunity to enact more holistic and lasting access fee reform, we concede that, for highly liquid securities, a 10 mil access fee cap reasonably threads the needle between countervailing adverse consequences. Accordingly, under a uniform fee model, we would be supportive of setting the access fee cap at 10 mils.”

¹⁴¹⁸ See *infra* note 1805 for a list of commenters suggesting this alternative, and a discussion of the costs and benefit of this alternative.

¹⁴¹⁹ See Proposing Release, *supra* note 11, at 80348 n.712. Net and quoted price rankings are coherent if sorting trading venues on the competitiveness of their quoted prices yields the same ordering as sorting on prices net of fees and rebates.

¹⁴²⁰ Exceptions are Citigroup Letter at 6, and World Federation of Exchanges Letter at 4. These commenters do not present arguments that counter those others in the comment file. The Commission believes that retaining a 30 mil access fee for stocks trading with a \$0.005 tick would further separate the price from the economics of the trade and disrupt the coherence between nominal and net pricing as the access fee cap would be greater than 50% of the tick size.

¹⁴²¹ See, e.g., MEMX Letter at 22–24 and Pragma Letter at 7.

¹⁴²² See 17 CFR 242.611(a)(1); see also 17 CFR 242.611(b) (exceptions).

¹⁴²³ For the liquidity demander in this example, the net proceeds of selling to the liquidity provider on the traditional exchange would be the quoted price of \$10.01 less the \$0.003 access fee, or \$10.007. On the inverted venue the liquidity demander would receive the quoted price of \$10.005 plus a taker rebate of \$0.003 from selling, or \$10.008. Although the liquidity demander would receive a better net price by selling at the inverted venue, because the traditional exchange has the better quoted price the order protection rule will prevent the trader from accessing the liquidity on the inverted venue before first accessing the liquidity on the traditional exchange.

¹⁴²⁴ See Budish Letter at 6.

¹⁴²⁵ See *supra* note 1077 and surrounding text discussing that access fees fund transaction rebates and while trading centers could subsidize rebates with non-fee revenues they do not do so in practice.

¹⁴²⁶ See Staff Report on Equity and Options Market Structure Conditions in Early 2021 (Oct. 14, 2021) available at <https://www.sec.gov/files/staff-report-equity-options-market-struction-conditions-early-2021.pdf>.

¹⁴²⁷ See section VII.C.2 for additional discussion about the roughly 2 mil estimated net capture rate for exchanges. At certain pricing tiers rebates may exceed the access fee cap. However, because total overall fees exceed the total rebates paid out, the average rebate would remain lower than the average access fee.

venues and approximately a 2 mils capture rate.

Table 13 uses volume estimates from table 5 to provide estimates of the fees and rebates that would have been collected and disbursed in 2023 if the amended access fee cap was implemented.¹⁴²⁸ Panel A shows that under the current system with a 30 mil access fee cap for quotations priced \$1.00 or more and a 0.3% access fee cap for transactions less than \$1.00, the exchanges collected an estimated \$3.4 billion in access fees and distributed \$3.1 billion in rebates in 2023, providing an estimated net capture of \$337 million for the exchanges in that time period.¹⁴²⁹ In table 13 the

Commission estimates that the exchanges would have collected \$1,188 million in access fees and distributed \$906 million in rebates in 2023 under the amendment to Rule 610, providing the exchanges a net capture of \$282 million in that time period. Thus, the Commission estimates that total access fees collected would have declined by \$2.23 billion and rebates distributed by \$2.17 billion in 2023.¹⁴³⁰ This amounts to an estimated decline in net capture of \$54.9 million across all exchanges. This decline is conditional upon exchanges maintaining a 2 mil capture rate for stocks trading at a price of \$1.00 or higher. Any estimated changes in total

net capture across exchanges is due exclusively to the change in the access fee cap for stocks trading below \$1.00.

Panel B provides estimates of the effect of the amendments on access fees paid and rebates received by liquidity demanders and providers separately. The Commission estimates that, under the amendments, liquidity demanders would have paid \$1.93 billion less¹⁴³¹ in access fees and liquidity providers would have received \$1.88 billion less in rebates in 2023. Thus, the current estimated \$2.6 billion in fee funded rebates in 2023 would have decreased by approximately 70% under the amendments.

TABLE 13—ESTIMATED ACCESS FEES AND REBATES COLLECTED—CURRENT AND ADOPTED 2023^a

	Current	Rule	Difference
Panel A: Estimated Access Fees Collected and Rebates (in Millions of Dollars)			
Fees Collected	3,414.00	1,188.91	– 2,225.21
Rebates Distributed	– 3,076.50	– 906.16	2,170.30
Exchange Capture	337.66	282.75	– 54.90
Panel B: Estimated Fees by Liquidity Type (in Millions of Dollars)			
Liquidity Demander	2,969.12	1,034.61	– 1,934.51
Liquidity Provider	– 2,631.47	– 751.86	1,879.61
Exchange Capture	337.66	282.75	– 54.90

^a This table takes trading volumes presented in table 5 to calculate aggregate fee and rebate estimates under the Rule. Current estimates of fees collected and rebates distributed are taken from table 6. The analysis presumes that exchanges with fees and rebates currently above 10 mils will decrease fees and rebates to a 10 mil fee and 8 mil rebate (the exceptions being IEX which charges 10 mils to takers and rebates 4 mils to makers, NYSE Chicago which charges both sides 10 mils, and LTSE which does not charge fees). For trading in securities priced less than \$1.00, estimates of fees and rebates presume that all sub \$1.00 fees from panel B of table 4 which are over 0.10% are reduced to 0.10%, fees at or below 0.10% remain the same. Computations are made per exchange and then aggregated as shown above.

Table 14 presents analysis showing an estimated total reduction of approximately \$55 million per year in net capture due to the reduction in the access fee cap and how it might in turn affect the transaction revenues of each of the various exchange families. This estimated decline in transaction revenue comes exclusively from the reduction in the access fee cap for transactions in securities below \$1.00.¹⁴³² This is

because, as previously explained, the Commission expects that for transactions priced equal to or greater than \$1.00 the exchanges should be able to maintain their current net capture.¹⁴³³ For transactions priced below \$1.00 most exchanges currently charge the maximum 0.3% but typically offer no rebates.¹⁴³⁴ Because very few exchanges offer rebates on stocks priced below \$1.00, the access fee represents

the exchange’s net capture. Lowering the access fee from 0.3% to 0.1% on these transactions will represent a decrease in net capture of 66% for many exchanges. This decrease may vary across exchanges. Some exchanges do not charge any fees for trading in sub \$1.00 securities, while others charge a fee to both sides of a sub \$1.00 transactions. Additionally, the exchanges differ in the fraction of sub

¹⁴²⁸ This assumes that exchanges continue the practice of funding rebates through access fees, that trading volumes are unchanged relative to 2023, that the distribution of trading volume across exchanges is unchanged, and that the distribution of trading volume priced below \$1.00 and at or above \$1.00 remains unchanged.

¹⁴²⁹ See table 6 for additional analysis on current estimates of exchange net capture.

¹⁴³⁰ Balancing out expected rebates paid on make-take, inverted, and flat fee venues, the Commission estimates that liquidity demanders will pay \$1.93 billion per year less in access fees netted across all venues under the Rule and liquidity providers will receive \$1.88 billion per year less in rebates netted across all venues.

¹⁴³¹ The ultimate effect of this change will not result in liquidity demanders saving the full \$1.93 billion in transaction costs, because the effect of reduced rebates will cause the quoted spread to

widen, offsetting this reduction in the access fee. See *supra* section VII.B.3, *infra* section VII.D.2.c for a discussion of these points.

¹⁴³² This \$54 million estimate is lower than the estimated \$89 million per loss year provided in the Proposing Release. The difference comes because the adopted access fee cap for transactions priced below \$1.00 is higher than the proposal: 0.10% compared to 0.05% proposed. This reduces the loss on transactions priced below \$1.00. Additionally, as can be seen by comparing Panel B of table 5 in the Proposing Release and table 4 herein, multiple exchanges have lowered access fees for transactions below \$1.00 since the proposal making the Rule’s difference from the baseline smaller.

¹⁴³³ As discussed in section VII.C.2, the Commission estimates that most exchanges have a net capture of approximately 2 mils on transactions priced greater than \$1.00. For reasons discussed in this section the Commission believes that it is

reasonable to assume that exchanges with a current 2 mil net capture would be able to continue to earn a 2 mil net capture.

¹⁴³⁴ See *supra* table 4. Most exchanges do not offer rebates for stocks priced less than \$1.00, or if they do the rebates are quite small.

¹⁴³⁵ See *supra* table 5.

¹⁴³⁶ The benchmark model in section VII.B.3 implies that a reduction in the access fee will cause the liquidity demand curve to shift, resulting in a higher volume of trades at sub-dollar prices. See *also infra* note 1462 and surrounding text for a case study on the effect of a rebate instituted by MEMX for sub-dollar trades, which resulted in a higher level of sub-dollar trades; if a reduction in the access fee has a similar effect on equilibrium trading as the institution of the rebate, then the volume of sub-dollar trades will increase and the reduction in exchange revenue will be mitigated.

\$1.00 trading volume that they handle.¹⁴³⁵ Table 14 provides an annual estimate of the effect on exchange transaction revenue of lowering the

access fee on exchanges' net capture given realized volumes in 2023 for each exchange group. To the extent that the reduction in the access fee causes more

trading at sub-dollar prices, table 14 overestimates the reduction in exchange transaction revenue.¹⁴³⁶

TABLE 14—ESTIMATED EFFECT OF RULE ON 2023 EXCHANGE TRANSACTION REVENUE FOR STOCKS PRICES BELOW \$1.00^a

	Transaction revenues (\$)	Transaction revenues (%)
Nasdaq	– \$18,593,052	– 20
NYSE	– 18,750,074	– 19
Cboe	– 12,375,769	– 16
MEMX	– 4,517,207	– 21
IEX	0	0
MIAX	– 667,838	– 7
LTSE	0	0
Total	– 54,903,941	

^a The variable Transaction Revenue (\$) provides an annualized estimate of the effect of the amendment to Rule 612 on exchange net capture. For all exchanges, other than LTSE which doesn't charge an access fee and IEX which has an assumed net capture of 6 mils per share traded above \$1.00 (Panel A of table 4 shows that IEX charges a fee of 10 mils coupled with a rebate of 4 mils), the net capture on transaction priced equal to, or greater than, \$1.00 per share is expected to remain unaffected by the amendments at the assumed 2 mils per share. The 2 mils per share assumption is further discussed in section VII.C.2.c. Thus, the Commission does not expect any decrease in overall exchange transaction revenue per share for shares priced above \$1.00. For transaction volume below \$1.00 per share estimates for the decline in transaction revenue is computed by assuming that under the amendments all exchanges currently charging more than 0.10% for transactions will lower the transaction fee to 0.10%. Exchanges currently charging access fees less than or equal to 0.10% will continue to charge their current rates. The list of current estimated exchange sub \$1.00 pricing comes from panel B of table 4. Sub \$1.00 dollar volume estimates for each exchange are from table 5. The estimated transaction revenue under the amendments is compared to the estimated transaction revenue in the current environment that is estimated using the sub \$1.00 transaction fees/rebates for each exchange presented in table 4 panel B and multiplying these fees by volume estimates for each exchange from table 5. See section VIII.C.2 for tables 4 and 5. The difference is presented in the table 14 along with the percent change in transaction revenue from the baseline.

Lastly, transaction fees in stocks priced less than \$1.00 serve to increase the net cost of accessing liquidity as they do not tend to fund rebates to liquidity providers so there is no incentive that could induce spreads to narrow and on average offset the fee.¹⁴³⁷ Lower transaction costs for these securities may improve liquidity for stocks with prices less than \$1.00. However, given the relatively low natural trading interest, the Commission does not expect a significant improvement in the trading environment for these securities.

Given the low net capture rates, the Commission concludes that in most cases, access fees are typically used to fund rebates and not used exclusively to fund execution services. Multiple commenters stated that current access fees and fee caps are not reflective of the current actual costs of providing execution services.¹⁴³⁸ One commenter stated that the cost of processing and matching trades has dropped with technological advances.¹⁴³⁹ Another commenter stated that “the fees charged by exchanges are often far in excess of

those necessary to maintain operations of the exchange.”¹⁴⁴⁰ A commenter pointed to significant reductions in spread and commissions since 2005, which have resulted in the 30 mil access fee cap representing a more significant economic factor in trading.¹⁴⁴¹

One commenter stated that a 10 mil access fee cap would represent a “fair pricing model based on the ‘cost plus reasonable return’ methodology” by citing that ATSs charge 10 mil fees while employing similar technologies as exchanges.¹⁴⁴² On this latter point, a

¹⁴⁴⁰ See Healthy Markets Letter I at 22.

¹⁴⁴¹ Citing its own previous comment letters one commenter has stated since at least 2014 that a reduction in the access fee cap is warranted given the reduction in trade commissions and narrowing of spreads relative to when the 30 mil access fee cap was first established. See Citigroup Letter at 5.

¹⁴⁴² See Verret Letter I at 5–7. One commenter provided their own review of form ATS–N and specifically looked at minimum and maximum ATS fees; the commenter reported that the maximum ATS fee often exceeds 10 mils by a considerable margin, see Nasdaq Letter III at 3. The Commission does not dispute that maximum ATS fees can exceed 10 mils, but the maximum ATS fee is not an appropriate benchmark for exchange access fees because the maximum ATS fee can be a function of particular services (e.g., block trades or special order types) or of subscriber characteristics (e.g., subscriber order flow might be segmented into specific categories), while an exchange's access fee schedule applies to all members. Another commenter presented analysis on the subset of ATSs that primarily operate a “continuous book” market and are therefore most closely comparable to exchanges. The commenter's analysis indicates

commenter stated that a uniform access fee cap of 10 mils would, “have the added benefit of aligning exchange fees with prevailing ATS fees, and creating a more equitable competitive landscape across trading venues.”¹⁴⁴³

In contrast, one commenter stated that the Commission had not established that the “proposed reduced fee caps do, in fact, bear a reasonable relationship to the actual costs to an exchange of a trade.”¹⁴⁴⁴ The same commenter stated that technological costs are not significant determinants of access fee levels, but rather that the fees reflect the magnitude of risk associated with providing liquidity as well as the value to the market that having access to those quotes provides.¹⁴⁴⁵ The commenter further stated that the current access fee cap is not “unreasonably high,” because, among other things, “exchange platform costs to market participants have remained competitive over

that seven such ATSs—representing 42% of all ATS volume—charge a maximum of 10 mils. The commenter concluded that the standard rate in the competitive ATS market is 10 mils, while rates substantially above 10 mils are due to specialized services not available on exchanges, see IEX Letter VI at 5; the Commission agrees.

¹⁴⁴³ See BlackRock Letter at 11.

¹⁴⁴⁴ Nasdaq Letter I at 22.

¹⁴⁴⁵ See Nasdaq Letter I at 21; Nasdaq Letter II at 4.

¹⁴³⁷ See *supra* section VII.B.3 for additional discussion of how fee-funded rebates are largely offset by changes in the quoted spread to keep net-costs the same.

¹⁴³⁸ See, e.g., Vanguard Letter at 6, Verret Letter I at 7, and Retirement Coalition Letter at 1.

¹⁴³⁹ See Better Markets Letter I at 15.

time.”¹⁴⁴⁶ As the quantitative net capture analysis shows, the access fee cap in the adopted amendments will still permit typical exchange net captures. Thus, for stocks priced greater than \$1.00, lowering the access fee cap is not expected to affect the contribution to revenue and thus to the platform. The following section discusses the effects of a reduction of fees and therefore rebates on the provision of liquidity.

c. Effects on Liquidity and Transaction Costs

The main implications for liquidity from reducing the access fee caps follow the basic principles laid out in sections VII.B.3, as well as the empirical results in section VII.C.2. Most exchanges charge close to the preexisting access fee cap due, in part, to the disincentive to unilaterally reduce fees and rebates. For the same reasons that exchanges charge close to the preexisting access fee cap, the Commission believes that lowering the access fee cap will lead exchanges to charge similarly close to the new cap. Some exchanges that are currently charging less than the amended access fee cap may continue to do so. Exchanges will most likely not alter their net capture rates, implying that much of the access fee will continue to fund rebates in stocks priced above \$1.00. For reasons discussed further below, the reduction in the access fee cap is likely to leave the cost of accessing liquidity unaffected for some stocks, and to reduce the cost of accessing liquidity for others.

For stocks priced less than \$1.00, the reduction in the access fee cap is also likely to reduce the cost of accessing liquidity. Unlike for stocks priced \$1.00 or more, for stocks priced less than \$1.00 most exchanges charge an access fee without providing a rebate.¹⁴⁴⁷ Since there is no rebate, which would serve to narrow spreads and offset the cost of the access fee, the access fee only serves to increase the cost of taking liquidity in these stocks. Therefore, a reduction in the access fee from 0.3% to 0.1% for stocks priced less than \$1.00 will lower the cost to take liquidity. Some exchanges offer rebates in transactions in stocks priced less than \$1.00.¹⁴⁴⁸ In these instances, under the assumption that these exchanges will uniformly reduce their fees and rebates to maintain the same net capture rate, the reduction

in the access fee cap is not expected to affect the cost of taking liquidity.

Additionally, reducing the access fee cap for stocks priced less than \$1.00 from 0.3% to 0.1% of the quote price will also ensure that the cost of accessing liquidity is similar for stocks with one quote below \$1.00 and another quote equal to or greater than \$1.00. Consider a stock with a best bid quote at \$0.99 and a best ask quote at \$1.00. Under the amendments, the maximum fee to access the bid quote is 9.9 mils and is roughly equal to the 10 mils maximum fee to access the ask quote. Had the Commission lowered the access fee cap for stocks priced \$1.00 or more but left it unchanged at 0.3% for quotes priced less than \$1.00, the cost of accessing the sub-\$1.00 quote would be relatively more expensive than the cost of accessing the \$1.00 or more quote. Here, had the fee cap for quotes priced at or higher than \$1.00 been reduced to 10 mils but the fee cap for sub-\$1.00 trades remained at 0.3%, the maximum allowable fee to access the \$0.99 quote would be 29.7 mils, roughly 3 times greater than that of accessing the ask price. Having a large differential between access fees on opposite sides of an order book would inhibit the ability of markets to reach prices most reflective of the underlying value.¹⁴⁴⁹

Commenters on the proposed access fee cap reduction focused on access fees for stocks priced above \$1.00.¹⁴⁵⁰ Several commenters argued for an alternative in which stocks with a half-penny tick would have an access fee of 15 mils, whereas stocks with a penny tick would have an access fee of 30 mils (hereafter “15 mils/30 mils alternative”).¹⁴⁵¹ As discussed in sections VII.B.3 and VII.C.2, there is a strong economic tie between the level of the access fee cap and the ability to pay rebates. The discussion among commenters focused on the effect on rebates, with some commenters who favored of the 15 mils/30 mils

alternative naming the ability to pay rebates as the primary reason for the higher access fee cap;¹⁴⁵² other commenters specifically were in favor of a ban on rebates.¹⁴⁵³ One of these commenters stated that banning rebates (by requiring exchanges to revert to a pricing model where both sides of a transaction were charged a fee) would fix the problems associated with access fees and rebates, but stated that a second best solution would be to impose a uniform access fee on all exchanges.¹⁴⁵⁴

Commenters in favor of the 15 mils/30 mils alternative expressed the concern that a 10 mils access fee cap would reduce the flexibility to offer rebates. The commenters assert that rebates are necessary to compensate liquidity providers to post displayed (or “lit”) quotes on exchanges.¹⁴⁵⁵ According to the commenters’ logic, a lower access fee cap translates into a lower rebate, which translates into fewer lit quotes. These commenters also state that those quotes that are posted are likely to be wider.¹⁴⁵⁶ Wider and fewer posted quotes, according to these commenters, signify lower market quality.

The Commission agrees that lowering the access fee cap is also likely to lower rebates because trading venues use access fees to fund rebates.¹⁴⁵⁷ The Commission also agrees that quoted spreads (spreads that do not reflect rebates or access fees) on lit exchanges are likely to be wider because liquidity providers would be expected to widen spreads to compensate for the lower rebates¹⁴⁵⁸—though the fact that the tick size amendments will lower spreads means that the two amendments combined may in fact lead to lower quoted spreads on some stocks.

¹⁴⁵² See, e.g., Nasdaq Letter I at 2.

¹⁴⁵³ See *We The Investors Letter I* at 3–4 (recommending banning rebates); see also Harris Letter at 4 (recommending reverting to traditional fees, thereby effectively eliminating rebates).

¹⁴⁵⁴ See Harris Letter at 4.

¹⁴⁵⁵ See, e.g., Nasdaq Letter I at 21, Nasdaq Letter II at 5–7, Interactive Brokers Group Letter at 5, Virtu Letter II at 10, Citadel Letter I at 24, WFE Letter at 4, CCMR Letter at 27, and State Street Letter at 4.

¹⁴⁵⁶ See *id.* Some commenters specifically identified the NBBO as a matter of concern (Nasdaq Letter IV at 7; Goldman Letter at 8; Nasdaq Letter I at 22, Virtu Letter II at 10.). The NBBO reflects lit quotes at a specific size and thus the arguments regarding the NBBO (with an exception described in more detail below) are the same as those for lit liquidity more generally.

¹⁴⁵⁷ See *supra* section VII.C.2 discussing why trading venues fund rebates with access fees and why rebates are not funded by other revenue sources.

¹⁴⁵⁸ See section VII.B.3 discussing how spreads are expected to widen in response to a reduction in fee-funded maker rebates so to keep the net cost of liquidity constant.

¹⁴⁴⁶ Nasdaq Letter II at 2 and 5.

¹⁴⁴⁷ See *supra* table 4.

¹⁴⁴⁸ For example, the Cboe EDGX and MEMX exchanges offer rebates for sub-\$1.00 stocks. See *supra* table 4 and surrounding discussion noting that only a few exchanges offer rebates in transactions for stocks priced \$1.00 or less.

¹⁴⁴⁹ Reducing the access fee cap for trades priced at \$1.00 per share or greater to 10 mils without a similar reduction in the fee cap for those priced below \$1.00 could distort markets by introducing an incentive for market participants to exploit differences in fees and rebates for stocks near the \$1.00 threshold. If the maker rebates available under the 0.3% fee cap for sub \$1.00 stocks are greater than those for quotes priced at or greater than \$1.00 then market participants, then market makers may be incentivized to push prices below \$1.00 as they could capture higher rebates by posting at bid and ask at \$0.98 and \$0.99 respectively as opposed to quoting at \$1.00 and \$1.01.

¹⁴⁵⁰ An exception is Cboe Letter IV and Letter II, discussed further at the end of this subsection.

¹⁴⁵¹ See, e.g., NYSE, Schwab, and Citadel Letter at 2, Nasdaq Letter I at 2, MMI Letter at 7, Robinhood Letter at 5, and MEMX Letter at 23–24. See also Nasdaq Letter IV and NYSE Letter I.

The Commission, however, disagrees with the commenters' statements that lower rebates from lower access fees will lower market quality and increase transaction costs. The Commission draws on the economic principles articulated in section VII.B.3.¹⁴⁵⁹ Figure 1 shows how the quoted spreads respond to an equal increase of an access fee and rebate of 30 mils assuming a stock is not tick-constrained. The change contemplated here is a shift of 20 mils because that is the difference between the baseline fee cap of 30 mils and the amended fee cap of 10 mils. When the fees and rebates change together, supply and demand intersect at the same quantity point (thus liquidity offered would be unchanged) but at a different price point, leading to a wider quoted spread. The net spread (the net cost of trading), which takes into account the fees and rebates, would be unchanged.¹⁴⁶⁰ Thus, the Commission disagrees with commenters who argue on the basis of quoted spread that the 10 mils access fee will lead to increased trading costs and lower liquidity.

Crucially, the reasoning above applies only to a stock with an economic spread of greater than the tick.¹⁴⁶¹ When the economic spread is less than a tick, rebates funded by fees result in a pricing distortion, as section VII.B.3.b explains. The price at which liquidity providers would be willing to offer liquidity is less than one tick in the presence of the rebate. However, the tick forms a binding price floor, leading to an oversupply of liquidity. Specifically, the set price of liquidity results in economic rents that accrue to some at the expense of others, in this case to those able to get to the front of the queue the fastest. For these stocks, lowering the access fee will better equate supply and demand and lower transaction costs for investors broadly.

One commenter discussed the introduction of a rebate for sub-dollar trades on MEMX and MIAx.¹⁴⁶² The

rebate, when introduced, was initially set to 0.3% of the dollar value of the trade,¹⁴⁶³ and was reduced to 0.05% several days later. The commenter presents empirical results indicating that the effective spread fell from approximately 0.4% to 0.25% of dollar value after the introduction of the rebate,¹⁴⁶⁴ and almost completely reversed back to 0.4% days later when the rebate was reduced to 0.05%.¹⁴⁶⁵ In short, a rebate of 0.3% of dollar value led to a reduction in effective spreads of 0.15% of dollar value. The commenter's empirical result is consistent with the

significant, as the data below suggests. It shows that in early December 2020, when MIAx and MEMX first introduced rebates for sub-dollar stocks, spreads for such stocks fell dramatically, but when MIAx and MEMX then slashed rebates soon thereafter, spreads reverted to their prior levels.¹⁴⁶⁶ That is, the rebate for sub-dollar trades was initially set equal to the access fee cap for sub-dollar trades.

¹⁴⁶⁴ See Nasdaq Letter II at 6. The effective spread is calculated as the signed difference between the execution price of a trade and the prevailing midpoint (*i.e.*, the execution price minus the midpoint for buy orders and the midpoint minus the execution price for sell orders); the commenter then divides this by the midpoint price to arrive at the effective spread as a percentage of the price (mirroring the fact that the rebate is paid as a percentage of the execution price). The effective spread differs from the quoted half-spread because a trade may receive price improvement—that is, the trade may execute at a better price than the best quote, so that the effective spread is lower than the quoted half-spread—or a large trade may execute against multiple levels of the order book. Both the effective spread and the quoted spread are measures of liquidity, but the quoted half-spread measures the prospective cost of trading immediately at the best available prices while the effective spread measures the ex-post cost of trading immediately (accounting for hidden orders and other sources of price improvement not known ex-ante, as well as order size). Additionally, because the effective spread measures the ex-post cost of trading immediately, it can only be calculated in the presence of a trade. Therefore, the effective spread is typically calculated by taking a weighted average of the effective spread across transactions—the commenter, for example, weighted the effective spread by the notional amount of each transaction. The quoted spread can be averaged over time—as with the TWAQS—because it is an ex-ante measure.

¹⁴⁶⁵ The commenter's results can be exhibited with a numerical example. Suppose in the absence of rebates a stock trades with a best offer of \$0.52 and a best bid of \$0.48, yielding a midpoint of \$0.50. A liquidity supplier at the offer would therefore receive proceeds of \$0.52 when their offer is executed against. The effective spread in the commenter's example would be calculated as the distance between the execution price and the midpoint, divided by the midpoint: $(\$0.52 - \$0.50)/\$0.50 = 4\%$. Now suppose that a rebate of 0.3% is offered by the exchange. In the commenter's analysis, this reduces the effective spread by 0.15% to 3.85% (from 4%). This implies that the offer price would shrink from \$0.52 to approximately \$0.51925 (keeping the midpoint constant at \$0.50 and using the fact that the effective spread must equal the difference in the ask and the midpoint, divided by the midpoint so that $3.85\% = (\$0.51925 - \$0.50)/\$0.50$). The liquidity provider would therefore earn \$0.51925 plus the rebate of 0.30% for a total proceed of \$0.5208 ($\$0.51925 + 0.003 * \$0.51925$).

model presented in figure 1. The model presented in figure 1 predicts that a rebate will cause the liquidity supply curve to shift by the amount of the rebate—liquidity suppliers are willing to offer liquidity at a lower price on account of the rebate. In contrast to panel B of figure 1, however, the commenter's example does not include an increase in the access fee to fund the rebate; therefore, the commenter's example can be modelled by recreating panel B without the shift in the demand curve—*i.e.*, the introduction of the rebate will cause the equilibrium outcome to shift from the point where the dotted lines intersect to the point where the solid supply curve intersects with the dotted demand curve. The model therefore has multiple empirical predictions for the commenter's example: when the rebate is introduced, without a similar increase in access fees, the model predicts that spreads will fall and the equilibrium amount of liquidity transacted will rise; when the rebate is rolled back, the model predicts that spreads will rise and the equilibrium amount of liquidity transacted will fall. The model's predictions on spreads are borne out by the commenter's data—spreads fell 0.15% when the rebate of 0.3% was in place, and spreads reverted when the rebate was rolled back.¹⁴⁶⁶ The model's prediction on the quantity of liquidity transacted are also borne out by Commission analysis—when the 0.3% rebate was in place, the dollar-volume of sub-dollar trades increased by a factor of three.¹⁴⁶⁷ In sum, the introduction of a rebate for sub-dollar trades on MEMX and MIAx resulted in a market reaction that is directionally consistent with the Commission's economic model presented in section VII.B.3.a and figure 1. The large and abrupt tripling of trading volume is also

¹⁴⁶⁶ The fact that spreads fell by less than the amount of the rebate indicates that rebates do not generally lower trading costs beyond the cost of funding the rebate; this is contrary to one commenter's statement that, "any cost savings non-retail investor participants realize from a reduction in the access fee cap are likely to be more than consumed by the rising frictional costs . . . associated with wider spreads." See Cboe Letter IV at 5, and further discussion surrounding *infra* note 1492.

¹⁴⁶⁷ In the week of Nov. 23, 2020, there was daily trade volume at sub-dollar execution prices of approximately \$330 million; the figure was \$383 million in the week of Dec. 7. The intervening week—the week of MEMX's 0.3% rebate for sub-dollar executions—saw \$1,025 million in daily trade volume at sub-dollar prices. The calculations are constructed using all normal trades that execute during normal trading hours from TAQ. Following the methodology in Nasdaq Letter II at 6, the calculations for the week of Nov. 30 exclude Nov. 30 and Dec. 4.

¹⁴⁵⁹ The discussion in that section regarding neutrality of fees and rebates does not depend on the access fee charged per share being equal to the rebate, but rather on fees and rebates being reduced or increased by the same amount. As the Commission does not expect the net capture rate to change, the neutrality result applies.

¹⁴⁶⁰ As explained in section VII.B.3, any change in access fees or rebates may be passed from brokers to customers either directly or indirectly, such as through changes in commissions or changes in the broker's services.

¹⁴⁶¹ See section VII.B.1 for the definition of the economic spread.

¹⁴⁶² See Nasdaq Letter II at 5–6 (stating "spreads would widen if access fees were to become inadequate to fund rebates to market makers and other participants that provide displayed liquidity to the markets. This widening would likely be

consistent with concerns that rebates cause excessive intermediation.¹⁴⁶⁸

Some comments address the question of incentives for trading on exchanges. These commenters state that, as a result of the Commission's adoption of 10 mils versus 15 mils/30 mils alternative, the volume on lit exchanges will decline.¹⁴⁶⁹ Other commenters disagreed, stating that lower access fees could lead volume on exchanges to increase.¹⁴⁷⁰ However, the above analysis indicates that liquidity providers would not be deterred from quoting on exchange because they could widen the quote, thereby receiving the same economic profit as they received with the rebate. Liquidity demanders would not be worse off because the reduction in access fee would offset, or, in the case of stocks with an economic spread of less than a tick, more than offset, the increase in spread.

Commenters specifically stated that posted quotes on exchange face the risk of adverse selection. They state that a premium is necessary to compete with the off-exchange market, and that the rebate provides that premium. As other commenters state, this does not take into account the access fee, which (all else equal) discourages liquidity takers from accessing exchanges. Moreover, a premium can come in the form of the spread as opposed to a rebate. While the order protection rule requires that trading centers enforce policies and procedures that are reasonably designed to prevent trades from being executed at a price worse than the protected quote, nothing prevents off-exchange non-displayed liquidity being at a better price for the liquidity taker and worse price for the maker, and indeed that happens under the current fee/rebate structure. Rather than moving liquidity

off-exchange, liquidity providers could widen the difference between on- and off-exchange quotes, leaving the underlying economic tradeoff the same.

The above analysis shows that the same opportunities that are available on-exchange in today's environment are still expected to be available with the adoption of these amendments, even under the lower access fee cap (indeed, these opportunities are expected to improve due to the amendments to Rule 612). However, commenters state that the off-exchange environment may change due to the amendments.¹⁴⁷¹ These commenters raise concern regarding the amount of liquidity that is displayed versus non-displayed. One commenter stated that wider quoted spreads on exchange increase the range of prices at which trades execute off-exchange.¹⁴⁷² Because Rule 611 generally requires that off-exchange trades execute within the NBBO, as on-exchange spreads widen, a liquidity provider, now facing a wider NBBO, would be able to offer a wider spread off-exchange than that liquidity provider could do now. The commenter appears concerned that this ability to offer a wider spread off-exchange than previously will attract liquidity to off-exchange, and more specifically, non-displayed venues.

However, while liquidity providers would have the ability to offer wider spreads off-exchange than prior to the amendments, they would not necessarily have the incentive to do so. For while wider spreads would mean greater profits for the liquidity provider, that is only the case if their orders are filled. As stated by a commenter, off-exchange liquidity would still need to compete with on-exchange liquidity, and that on-exchange liquidity is now less expensive to access due to a lower access fee cap.¹⁴⁷³ If the spread off-exchange were to widen, non-displayed off-exchange quotes would be unlikely to attract liquidity takers. Therefore, there is not an incentive for liquidity providers to migrate off-exchange due to wider spreads on exchange. To summarize, spreads may widen on-exchange increasing pricing flexibility off-exchange, even so exchanges are not

expected to lose volume due to the reduction in the access fee cap through this mechanism.

One commenter stated that volatility may increase due to the wider quoted spread when the access fee reduction causes a reduction in rebates.¹⁴⁷⁴ The Commission acknowledges that wider spreads definitionally imply a greater difference between the bid and the ask. However, spreads that better reflect the true underlying cost of liquidity are more efficient than spreads that mask this cost.

One commenter stated that a reduction in rebates will lead to more off-exchange trading, which in turn will cause the NBBO to widen, and result in worse execution for off-exchange trading, because of the way some off-exchange trading uses the NBBO as "a reference price for benchmark pricing and other risk functions."¹⁴⁷⁵ First, the Commission describes above why the adopted amendments will not result in a large amount of trading moving off-exchange. Furthermore, while the Commission does expect the quoted spread, and therefore the NBBO, to widen, we disagree that this will result in worsening off-exchange executions. This commenter provided two examples of situations in which off-exchange executions might worsen. The first is an ATS that provides execution mechanisms based on the NBBO.¹⁴⁷⁶ As explained in section VII.B.3.a, the reduction in access fees and corresponding reduction in rebates will not change the net spread on exchange. This means the cost of liquidity will not materially change. There is no reason why ATSs that base execution prices off the NBBO cannot alter their pricing formulas to preserve the same execution prices (e.g., by executing inside the NBBO by a pre-determined amount). Indeed, a typical example of such matching mechanisms are mechanisms that match buy and sell orders at the midpoint, and this will not be impacted at all by a wider NBBO. The second example provided by the commenter was the case of retail wholesalers. The commenter states that these wholesalers

¹⁴⁶⁸ See *supra* note 1005, and see also the Proposing Release, *supra* note 11, at 80292.

¹⁴⁶⁹ See, e.g., Choe Letter II at 8–9, Choe Letter IV at 3–5, Nasdaq Letter I at 22–23, Nasdaq Letter II at 4, Nasdaq Letter IV at 9, and Nasdaq Letter V at 2, predicting that a reduction in rebates will increase segmentation and may make ATSs and single-dealer platforms more attractive. See also *infra* note 1761 and surrounding text.

¹⁴⁷⁰ See Better Markets Letter I at 15 stating that "A reduction in access fees will impose lower costs on investors, removing a disincentive for trading on exchanges." Healthy Markets Letter I at 22, stating "Brokers' avoidance of these [access] fees is a significant contributor for brokers often choosing to internalize or first route to ATSs or OTC market makers, rather than to exchanges", IEX Letter I at 26 (stating "A substantial reduction in the access fees will be impactful for those investors and is likely to increase their willingness to trade on exchanges. . . . The result can be an increase in the use of displayed exchange trading and an improvement in the price discovery function of the market, with broad benefits extending beyond trading on exchanges themselves"), See also IEX Letter IV at 18–19, BMO Letter at 3, and Themis Letter at 7–8.

¹⁴⁷¹ See *supra* note 1479 and surrounding discussion.

¹⁴⁷² See Choe Letter III at 5: "Wider spreads are likely to most benefit wholesale broker-dealers, that may be able to offer more levels of price improvement, but at the expense of increased frictional costs for investors."

¹⁴⁷³ See IEX Letter IV at 23: "The fact that exchanges use rebates to draw orders from other exchanges says nothing about the ability of exchanges to attract more orders that now go to off-exchange venues by using lower access fees and offering better execution quality."

¹⁴⁷⁴ See Goldman Sachs Letter at 8.

¹⁴⁷⁵ See Choe Letter IV at 5: ". . . the NBBO is utilized by many market participants as a reference price for benchmark pricing and other risk functions. In addition, if on-exchange liquidity moves to off-exchange venues such as alternative trading systems, these trading centers commonly use the NBBO as a reference price for executing transactions, which will make transactions in off-exchange venues more expensive as well. Wider spreads are likely to most benefit wholesale broker-dealers, that may be able to offer more levels of price improvement, but at the expense of increased frictional costs for investors."

¹⁴⁷⁶ See Choe Letter IV at 5.

“may be able to offer more levels of price improvement,” but this will come at the expense of increased costs of trading from wider spreads.¹⁴⁷⁷ The Commission again disagrees with this assertion. Because the cost of liquidity will be largely unchanged, the price improvement¹⁴⁷⁸ acknowledged by the commenter will be capable of offsetting the change in quoted spread.

One commenter stated that eliminating the access fee would cost retail investors as much as \$678 million per year.¹⁴⁷⁹ The commenter arrives at this estimate by using the BJZZ algorithm to identify retail trades from TAQ data,¹⁴⁸⁰ and computes the effective/quoted ratio (EQ ratio) for each trade.¹⁴⁸¹ The effective to quoted spread ratio computed as follows

$$EQratio = \frac{Execution\ Price - NBBO\ midpoint}{NBBO\ Half\ Spread}$$

They assume that spreads will widen for all trades by 60 mils in the absence of rebates. They then apply the observed EQ ratio to the hypothetical 60 mil wider spreads in the absence of rebates to compute hypothetical transaction costs for retail investors under a world without rebates.

The Commission disagrees with the commenter's assertion that retail traders will receive worse execution due to the reduced access fee cap. As this section describes, quoted spreads for stocks trading with more than one tick intra-spread are expected to widen on average by about 40 mils. However, the commenter's analysis relies on the assumption that the EQ ratio for retail order executions will remain constant.¹⁴⁸² The commenter provided no evidence to support this assumption.

¹⁴⁷⁷ See Choe Letter IV at 5.

¹⁴⁷⁸ Retail wholesalers frequently offer “price improvement” on orders they receive, where they execute the order on a principal basis at a price better than the NBBO.

¹⁴⁷⁹ See Nasdaq Letter II at 6.

¹⁴⁸⁰ “BJZZ” refers to the algorithm designed by Boehmer Ekkehart, Charles M. Jones, Xiaoyan Zhang, and Xinran Zhang. See Boehmer Ekkehart, et al., *Tracking Retail Investor Activity*, 76 J. Fin. 2249 (2021).

¹⁴⁸¹ The EQ ratio measures how close to the NBBO or NBBO midpoint a trade executes at. A trade executing at the midpoint would have an EQ ratio of 0, while a trade that executes at the NBBO would have an EQ ratio of 1.

¹⁴⁸² The commenter's methodology is also flawed because the BJZZ algorithm they employ to identify retail trades has been shown in recent research as not being a very accurate measure of retail trading volume. See Brad M. Barber, Xing Huang, Philippe Jorion, Terrance Odean, & Christopher Schwarz, *A(sub)penny For Your Thoughts: Tracking Retail Investor Activity in TAQ* (working paper, Aug. 14, 2023), available at <https://ssrn.com/abstract=4202874> (retrieved from SSRN Elsevier database. If the algorithm does not reliably identify retail trades then it is unclear what can actually be learned about retail trading volume from the exercise.

This assumption is important because economically what matters is not the distance of the trade price from the NBBO, but rather the distance of the trade price from the midpoint—the effective spread. The effective spread covers the costs associated with providing liquidity as well as provides the liquidity provider's profits. Assuming a constant EQ ratio in the commenter's analysis implies that wholesalers internalize retail orders at prices that are farther from the midpoint, and thus the wholesaler will earn more money without providing any additional benefit to retail traders or their broker-dealers.¹⁴⁸³ Wholesalers are subject to competitive forces that apply at the level of average execution quality, and it is unlikely that market forces would allow such excess profits to wholesalers for no additional benefit to persist.¹⁴⁸⁴ It also seems unlikely that the EQ ratio would change mechanically with the NBBO because if the NBBO itself were the primary determinate of the price level at which retail trades were internalized, and wholesalers were free to choose any price level within the NBBO, then wholesalers would routinely internalize orders at or near the NBBO implying an EQ ratio for retail trades of near 1. This is not the case. Wholesalers currently internalize retail orders at prices that are significantly inside of the NBBO (*i.e.*, EQ ratios significantly less than 1) suggesting that other factors besides the NBBO itself, such as distance from the midpoint, determine the transaction price of retail orders that are internalized by wholesalers.¹⁴⁸⁵ These price levels will still be feasible for wholesalers under the amendments, and so even with a wider NBBO, wholesalers are likely to transact retail

¹⁴⁸³ The effective spread is defined as the signed difference between an order's execution price and the midpoint of the quoted spread; the larger the difference the less competitive the executed price is relative to the midpoint. Because the EQ ratio is equal to the effective spread divided by the quoted spread, the effective spread would have to increase at the same scale by which the quoted spread widens in order to keep the ratio constant.

¹⁴⁸⁴ So long as there is some degree of competition, this argument would hold. A market that is more competitive may have retail effective spreads that would be lower, but in either case a change in the NBBO, with no other changes to wholesaler costs or competition would not be expected to change wholesaler profits.

¹⁴⁸⁵ See Citadel Letter I at 33 showing EQ ratios ranging from .27 for small retail orders to .88 for very large orders, CCMR Letter at 35 showing average EQ ratios around .5 for the top three wholesalers and Charles Schwab, *U.S. Equity Market Structure: Order Routing Practices, Considerations, and Opportunities*. (2022) (“Schwab 2022 Whitepaper”) at 9, 16, available at <https://content.schwab.com/web/retail/public/about-schwab/Schwab-2022-order-routing-whitepaper.pdf> (showing its EQ ratio of .33).

orders at similar price levels under the amendments as they are today.

Put another way, economically there is no reason to assume that relaxing a non-binding constraint, in this case widening the quoted NBBO, would have an effect on existing equilibrium behavior. The NBBO does not constitute a binding constraint for wholesale execution of many retail trades.

In cases where the NBBO does constitute a binding constraint, there are two important missing pieces from the commenter's analysis. The first is that, for on-exchange execution, the wholesaler will pay a lower access fee. Assuming (as the commenter's analysis implicitly does) that the wholesaler does not pass on these lower fees at least in part to some investors assumes a lack of competitive dynamics in the retail execution market. Second, the commenter's methodology fails to take into account the expected reduction in quoted spreads for some stocks due to the reduction in the tick size. In cases where the NBBO constitutes a binding constraint on wholesaler price improvement, then wholesalers will offer better execution on these stocks. Moreover, there are cases in which current wholesale execution may fall between the spread under the new tick size, and the previous spread. In these cases, the new tick size creates a new binding constraint, leading to better execution for retail investors. So, if anything, the combined effect of the amendments could improve retail execution quality on average.

Additionally, as a general matter, some commenters stated that the lower access fee on exchanges will make exchanges a more attractive place to access liquidity.¹⁴⁸⁶ The Commission believes that the cost of accessing liquidity will decline for those stocks which continue to trade with a one tick wide spread; the Commission, however, disagrees that the cost of accessing liquidity will change on average for other stocks.¹⁴⁸⁷

Some commenters stated concerns that less liquid stocks may be more susceptible to any negative effects on liquidity from a reduction in rebates.¹⁴⁸⁸

¹⁴⁸⁶ See Healthy Market Letter at 23, BlackRock Letter at 11, BMO Letter at 3, and Themis Letter at 7–8.

¹⁴⁸⁷ For stocks which do not trade with a one tick wide spread the cost of accessing liquidity for any one instance may be higher or lower with a reduced fee cap, however on average the cost of accessing liquidity is not expected to change for those stocks. See *supra* section VII.B.3.b for additional discussion.

¹⁴⁸⁸ See Nasdaq Letter II at 5–7: “This peril is particularly acute for thinly-traded securities.” and Virtu at 10: “The reduced incentives for liquidity

Other commenters suggested that a higher fee cap should be adopted for illiquid stocks.¹⁴⁸⁹ However, adopting a separate fee cap for illiquid stocks would introduce more complexity into the market. The Commission's response is the same as the broader concern regarding posted liquidity: spreads may widen but the cost of accessing and providing liquidity will on average not change.

One commenter stated a reduction in rebates would lead to the exit of liquidity providers, harming competition,¹⁴⁹⁰ a lower access fee cap is expected to reduce the fees which are used to fund rebates and consequently rebates are expected to also see a reduction. The Commission acknowledges that profits of liquidity providers may fall because for stocks that remain tick-constrained, the access fee represents a transfer from liquidity demanders to liquidity providers. However, a net decrease in competition could serve to widen the spread beyond a single tick and increase the proceeds of liquidity provision thus incentivizing liquidity provision. While the Commission anticipates and is sensitive to costs to some affected parties, the Commission expects investors, more broadly to benefit.¹⁴⁹¹

Another commenter stated that lowering the access fee cap would result in a "liquidity gap"; that "it is unlikely that the liquidity gap would be met by other market participants;" and that "as spreads further widen, any cost savings non-retail investor participants realize from a reduction in the access fee cap are likely to be more than consumed by the rising frictional costs."¹⁴⁹² The Commission disagrees that lowering the access fee cap would result in a liquidity gap that market participants would not be able to fill, because if quoted spreads widen beyond any reduction in maker rebates, liquidity providers would stand to earn higher proceeds by supplying at the wider spread. The Commission believes that competition among liquidity providers will keep the cost of accessing liquidity from rising on average in securities where the minimum quoting increment

is not a meaningful constraint.¹⁴⁹³ In those stocks that trade with a quoted spread equal to the tick size, the Commission expects that the reduction in access fees will reduce the net cost of accessing liquidity.¹⁴⁹⁴ Therefore, non-retail investors would likely see a reduction in overall frictional costs. Finally, one commenter stated that reducing the access fee cap for stocks priced less than \$1.00 would impact an exchange's ability to differentiate itself, and the estimated decrease in transactions revenue from these stocks would limit its investments in innovation and technologies.¹⁴⁹⁵ The impact on an exchange's ability to offer different fees and rebates for stocks priced less than \$1.00 is not likely to be large as there is not a substantial degree of differentiation across exchanges currently.¹⁴⁹⁶ Most exchanges charge fees near or at the fee cap to liquidity takers, and only two exchanges offer rebates to liquidity takers. This is unlikely to change following a decrease in the fee cap. The Commission acknowledges a loss in revenue due to the reduction in rebates for stocks priced below \$1.00. It is possible that this could impact exchange investment in new technologies. However, as discussed above in this section, the amendments to Rule 612 are anticipated to lead to more volume on exchange, and hence more trading revenue to exchanges, offsetting this effect. Moreover, as discussed earlier in this subsection, it is necessary to conform rebates for stocks priced below \$1.00 with those for stocks priced above \$1.00.

One commenter suggested implementing the amendments to reduce the access fee caps before the minimum pricing increments to isolate the impact of the access fee cap on its own.¹⁴⁹⁷ The Commission has separately considered the impact of the amendments to Rule 612 with the new access fee in place; specifically, the change in the access fee will cause quoted spreads to widen, which may cause some stocks that currently would qualify for a reduction in their tick size under the adopted amendments to Rule 612 to no longer qualify for such a

reduction.¹⁴⁹⁸ However, many stocks will continue to qualify. While the Commission acknowledges that postponing amendments to Rule 612 would allow for time to study the access fee cap in isolation, there is no mechanism by which a reduction in the access fee cap, on its own, would yield the full benefits of the proposed amendments to Rule 612.

The Commission acknowledges that changing the access fee cap at the same time that the changes to Rule 612 are implemented will cause some stocks assigned to a narrower tick size to immediately trade with a quoted spread too wide to qualify for continued assignment to the \$0.005 tick size bucket. However, a delay in implementing changes to Rule 612 would delay the accrual of the other benefits the Commission has identified for these changes.

d. Other Effects of the Access Fee Cap Reduction

The Commission anticipates additional benefits inherent to adopting a lower access fee cap for all securities.

Access fees that fund rebates contribute to complexity in markets because they separate both the true cost of demanding liquidity and the proceeds from supplying liquidity, as represented by the quoted half-spread. Commenters stated that lowering the access fee cap to 10 mills would reduce complexity; one commenter stated in the context of supporting a significant reduction in exchange access fees, that current pricing models "contribute to market complexity by encouraging rebate arbitrage strategies and the proliferation of new order types and trading venues designed to exploit different transaction pricing models."¹⁴⁹⁹ Similarly, a second commenter supported a 10 mil fee cap and stated that maker-taker models, "introduce unnecessary market complexity through proliferation of new exchange order types (and new exchanges) designed solely to take advantage of pricing models."¹⁵⁰⁰ The same commenter stated that maker-taker pricing may drive orders off exchanges to avoid access fees, and "benefit sophisticated market participants, like market makers and proprietary traders, at the expense of other market participants."¹⁵⁰¹

One manifestation of this complexity is the potential conflict of interest between broker-dealers and their

in thinly traded securities is especially concerning given how much liquidity improvements actually reduce an issuer's cost of capital and impact their ability to attract investors." See also Virtu Letter II at 10, Tastytrade Letter at 2.

¹⁴⁸⁹ See Citigroup Letter at 6, TRP Letter at 4–5.

¹⁴⁹⁰ See Virtu Letter II at 19, Cboe Letter III at 3–4.

¹⁴⁹¹ Some Commenters agree. See, e.g., Verret Letter I at 9, Retirement Coalition Letter at 2, Themis Letter at 7, ASA Letter at 4.

¹⁴⁹² See Cboe Letter IV at 3, 5; see also Cboe Letter III, at 6.

¹⁴⁹³ See section VII.B.3.

¹⁴⁹⁴ *Id.*

¹⁴⁹⁵ See Cboe Letter II at 9; see also Cboe Letter IV at 1.

¹⁴⁹⁶ See *supra* table 4 and surrounding discussion.

¹⁴⁹⁷ See State Street Letter at 5, stating: "We recommend . . . [i]mplementing any changes to access fee caps before changing quoting increments, to isolate and evaluate the effects. This includes examining whether reducing the access fee cap may affect a security's designation as 'tick-constrained.'"

¹⁴⁹⁸ See *supra* table 7, note a.

¹⁴⁹⁹ See Vanguard Letter at 6.

¹⁵⁰⁰ See BMO Letter at 3.

¹⁵⁰¹ See *id.*

customers.¹⁵⁰² Multiple commenters stated that a benefit of a lower access fee cap is that it would mitigate such potential conflicts of interests.¹⁵⁰³ Other commenters disagreed.¹⁵⁰⁴ Some commenters state that due to the complexity, opacity, and potential conflicts inherent in the rebate structure, the Commission should go further than in the current adopted amendments and ban rebates altogether.¹⁵⁰⁵ The Commission agrees that lowering the access fee cap reduces complexity and may help alleviate potential conflicts of interest.

Finally, the reduction in the access fee cap will improve market quality for stocks that remain tick-constrained. While the amendments to Rule 612 create a smaller tick size for stocks with narrow spreads, spreads naturally vary over time and this variation introduces the possibility that some stocks could be misassigned to a tick size because trading in the operative period differs from the evaluation period due to factors exogenous to the tick change.¹⁵⁰⁶ Panel A of table 10 shows that approximately 13.7% of aggregate share volume will be a false negative under the amendments¹⁵⁰⁷—that is, this volume will be assigned a penny tick, but will trade at a TWAQS below \$0.015 and therefore trade with a tick-constrained spread a majority of the time. Moreover, some stocks may remain tick-constrained, even at the new half-penny tick. Reducing the access fee cap would lower the cost of accessing liquidity because fee-funded rebates serve as a pure tax on liquidity demanders whenever the spread is tick-constrained (creating a wealth transfer from liquidity demanders to liquidity providers); the reduction in the access fee cap will also reduce the excess supply of liquidity at this price floor.¹⁵⁰⁸

¹⁵⁰² See *supra* note 1518 and surrounding text discussing the potential conflicts of interests that exchange fees and rebates may introduce.

¹⁵⁰³ See *infra* note 1514.

¹⁵⁰⁴ See, e.g., Nasdaq Letter I at 2.

¹⁵⁰⁵ See Harris Letter at 4–5, and We The Investors Letter I at 7, arguing that the Commission should go further and ban the use of rebates.

¹⁵⁰⁶ See section VII.D.1.d for discussion and analysis of the tradeoffs inherent in tick assignment.

¹⁵⁰⁷ This number corresponds to an evaluation period of three months and an operative period of six months, which are the parameters of the rule text. See section VII.D.1.d.

¹⁵⁰⁸ As discussed above (e.g., *supra* section VII.B.2), a binding price floor on liquidity results in more liquidity supply than demand. Maker-taker pricing exacerbates this problem by taxing demand and subsidizing supply at the price floor. By reducing the access fee, the excess supply is lessened. The lower cost of accessing liquidity can also extend to stocks which trade with a TWAQS greater than \$0.015 to the extent to which these

3. Exchange Fees and Rebates Determinable at the Time of Execution

In the current environment, as discussed in section VII.C.2, market participants often have to make trading decisions without the ability to determine the exchange fees and rebates they incur at the time of execution, and a market participant's total cost of trading can vary by a significant amount for orders with the same quoted execution price once exchange fees and rebates are accounted for. Current exchange fees and rebates are often based on the participant's relative contribution to the exchange's monthly trading volume during the contemporaneous month, and market participants need to grapple with the uncertainty of forecasting future market outcomes should they wish to know what their trading costs are at the time that they execute a trade.¹⁵⁰⁹ Requiring fees and rebates to be determinable at the time of execution will result in the benefits of increased transparency as to what fees and rebates broker-dealer members are committed to pay when they trade, reducing potential conflicts of interest, and potentially improving broker-dealer routing decisions. These amendments will also result in costs to exchanges associated with revising existing fee schedules to bring them into compliance with the adopted amendments.

The Commission received comments from a broad range of commenters who expressed support for Proposed Rule 610(d) because it would provide enhanced transparency surrounding transaction fees and rebates and alleviate concerns related to potential conflicts of interest.¹⁵¹⁰ For example, one commenter stated that it agreed with the Commission's analysis of the benefits of making fees and rebates determinable at time of execution.¹⁵¹¹ Another commenter stated that it agreed with the Commission's assessment “. . . of how existing exchange pricing tier models can negatively impact market participants behavior.”¹⁵¹² A third commenter stated that the Rule will “help to make overall trading costs more transparent.”¹⁵¹³

stocks may occasionally trade with a spread equal to the tick size.

¹⁵⁰⁹ See also Proposing Release, *supra* note 11, at 80292 for a discussion of the complexity of fee schedules and the difficulty in forecasting fees for a contemporaneous period.

¹⁵¹⁰ See section IV.E for a discussion of the comment file.

¹⁵¹¹ See Council of Institutional Investors Letter at 4.

¹⁵¹² See BMO Letter at 4.

¹⁵¹³ See Retirement Coalition Letter at 2.

Multiple commenters pointed out the potential for exchanges' pricing models to create a conflict of interest for broker-dealers who route multiple customers' orders to the exchanges.¹⁵¹⁴ One commenter stated that the benefits of pricing determinable at time of execution include “help[ing] broker-dealers make better order routing decisions,” and reducing order routing incentives based “on achieving a threshold to gain a specific fee or rebate.”¹⁵¹⁵ Another commenter also stated that exchanges have little incentive to make fees and rebates determinable at the time of trade because the fee and rebate structure creates “captive customers” that direct order flow to a given exchange in hopes of receiving a given fee or rebate tier in a given month.¹⁵¹⁶ One commenter agreed that fees determinable at time of execution has “the potential” to facilitate pass-through of fees and rebates to broker-dealers' customers, and thereby alleviate concerns about “perceived” conflicts-of-interest, but characterized such concerns about conflicts-of-interest as “misplaced.”¹⁵¹⁷

As discussed in the Proposing Release, access fees create potential conflicts of interest between brokers and end customers to the extent that brokers can route orders to exchanges with worse execution quality for end customers but more advantageous fees (i.e., a low fee or a high rebate) for the brokers, which the brokers do not pass on to end customers.¹⁵¹⁸ For example, a broker may route a customer's limit order to an exchange with a high rebate for liquidity provision, but a relatively low fill rate. The end result would be a high rebate payment for the broker but potentially poor execution quality for the customer.

One commenter stated that the supposition that rebates present

¹⁵¹⁴ See Vanguard Letter at 6 (“These pricing models can create conflicts of interest with a broker's obligation to obtain best execution for a customer . . .”); STA Letter at 7 (“Today, the primary concerns on access fees are how they contribute to the maker/taker or taker/maker pricing models offered by exchanges and the offshoots of conflicts of interests in the routing of customer order flow by broker dealers.”); Retirement Coalition Letter at 2 (“the use of rebates creates conflicts of interest, because when an institutional order is sent as a displayed order, the potential for a rebate may influence where a broker sends the order, even when the investor could receive a better execution on another market.”); CII Letter at 3 (“The existing system disadvantages institutional investors because we believe rebates create the kinds of conflicts of interest identified in our policy.”).

¹⁵¹⁵ BMO Letter at 4.

¹⁵¹⁶ See BMO Letter at 4.

¹⁵¹⁷ See Nasdaq Letter I at 32.

¹⁵¹⁸ See Proposing Release, *supra* note 11, at 80330.

conflicts of interest is not supported with evidence.¹⁵¹⁹ There are, however, significant reasons to believe that rebates present a conflict of interest to agency brokers, even if there is uncertainty regarding to what degree those potential conflicts of interest are being acted upon. Namely, as described above, the quality of the execution accrues to the customer while the rebate accrues to the broker, which leads to a clear divergence of interests whenever the best rebate and the highest quality execution opportunities differ.

Having fees and rebates determinable at the time of execution will mitigate these potential conflicts of interest by increasing broker-dealer accountability to their customers.¹⁵²⁰ This is because the broker-dealer will be able to identify which fees and rebates are associated with which customer order, which at present is not possible at the time of execution.¹⁵²¹ Having information about the fees and rebates paid as the order is filled will also improve a customer's ability to negotiate routing behavior and monitor the effects that fees and rebates have on its broker's order routing decisions and execution quality.¹⁵²²

In addition, fees and rebates being determinable at the time of execution can make it easier for broker-dealers to pass the actual fees and rebates on to the end customer.¹⁵²³ Currently, it can be difficult for a broker-dealer to pass on fees and rebates to individual customers because the exchange fee and rebate pricing tier into which a broker-dealer falls, which ultimately determines fees and rebates on an individual trade, is typically based on the broker-dealer's relative activity across the concurrent month and not an individual trade.¹⁵²⁴

With fees and rebates known at the time of execution, it could be possible for a broker-dealer to more quickly and easily determine the amount to be passed back to the customer. To the extent the amendments increase the proportion of exchange fees and rebates that broker-dealers pass through to end customers,¹⁵²⁵ this will benefit investors and also will reduce the potential benefits broker-dealers may receive from routing customer orders to exchanges with lower fees or higher rebates and thereby reduce distortions in customer order execution quality that this may cause.

A commenter agreed with the Commission's assessment in the Proposing Release that the ability of institutional investors and other market participants to evaluate order execution and routing is significantly impeded by a lack of determinability.¹⁵²⁶ A lack of determinability reduces the amount of information that a market participant can use when evaluating order execution and routing decisions. Without the fees and rebates being determinable, broker-dealers may have difficulty transmitting information about fees and rebates to customers—the broker-dealer could not commit to a fee or rebate at execution, but would rather need to explain that uncertainty regarding fees and rebates could not be resolved until the end of the month—which may impede competition among broker-dealers.¹⁵²⁷ In contrast, under the adopted amendments, it will be possible for broker-dealers to relay such information about fees and rebates incurred by the broker-dealer to the customer at the time of execution.¹⁵²⁸ This will make the information more usable for customers such as institutional investors, increasing their

incentives to ask for such information, as well as increasing the ability of the broker-dealer to transmit the information in a timely manner.

One commenter stated that, “[f]ew brokers route directly to the exchanges . . . Rather, most brokers pay to route their orders through larger ‘[direct market access] DMA’ brokers to gain the benefit of the large brokers’ exchange fee tiers. While the Proposal would simplify life for those few large DMA brokers and proprietary trading firms who closely track where they fall on exchange fee schedules, it wouldn’t directly help the referenced Market Participants.”¹⁵²⁹ The same commenter stated that most Market Participants, “judging by common practice today,” would be unable to account for fees, and the requirements would not improve transparency for off-exchange trading where venues “are not required to charge standard fees, and where fees are often held as competitively sensitive secrets.”¹⁵³⁰ The Commission agrees that under common practice today it can be difficult for most Market Participants to account for fees that are not determinable or known at the time of execution. That said, having exchange fees and rebates determinable at the time of execution will make it more likely that larger DMA brokers pass exchange fees and rebates on to their customers, including when these customers are small brokers routing their orders through them. That is because customers can better discuss fees and rebates with large DMA brokers, and the information will be more useful to customers because it is more timely. Also, while the requirements only apply to exchange fees and rebates, exchange and off-exchange trading venues compete, and transparency in exchange fees and rebates could prompt demand for greater transparency in off-exchange trading fees.¹⁵³¹

One commenter stated that rebate tiers increase aggregate liquidity, and that fee and rebate determinability will, “disrupt existing economic incentives,” and, “negatively impact exchange liquidity provision and drive even more liquidity to off-exchange venues.”¹⁵³² Another commenter stated that this rule “disrupts existing economic incentives without justification,”¹⁵³³ and added

¹⁵²⁹ See Pragma Letter at 8.

¹⁵³⁰ See *id.* at 8 (“Even if fees are determinable, it will provide little practical transparency for most Market Participants.”).

¹⁵³¹ See *infra* section VII.E.2 for additional discussion of the competitive effects of these amendments.

¹⁵³² See Choe Letter II at 9–10.

¹⁵³³ See Choe Letter I at 9.

¹⁵¹⁹ See Nasdaq Letter I at 2.

¹⁵²⁰ See Proposing Release, *supra* note 11, at 80330.

¹⁵²¹ See *supra* note 1092 and surrounding discussion on information that customers can request from broker-dealers on net transaction fees and rebates through Rule 606(b)(3).

¹⁵²² One commenter agreed with the Commission's statement in the Proposing Release that fees being determinable only at the end of the month, as they are currently, impedes investors' ability to evaluate best execution and order routing. Council of Institutional Investors Letter at 4. The Commission believes that making fees determinable at time of execution will help investors make these evaluations, which can contribute to these discussions of fees with their broker-dealers.

¹⁵²³ The Proposing Release discussed how the inability to know the fee or rebate at the time of a trade could render it difficult for a broker-dealer to pass on fees and rebates to customers to help avoid a potential conflict of interest. See Proposing Release, *supra* note 11, at 80329. See also Council of Institutional Investors Letter at 4–5.

¹⁵²⁴ See *supra* note 1084 and surrounding discussion on the current practice of volume-based fee tiers. While the Commission has described the tiered structure of many exchange fee schedules, the benefits of fees and rebates being determinable

at time of execution do not depend on, or result from, the fee schedules using volume tiers. The amendments do not ban volume tiers; exchanges can continue to offer volume tiers as long as the tier is based on past—rather than future—volume. Likewise, the benefits of determinability apply even if volume tiers did not exist. For example, some exchanges offer incentives to market makers for frequent quoting at the NBBO—the amendments require that such incentives be based on past quoting at the NBBO so that market participants could determine with certainty their fee at the time of execution.

¹⁵²⁵ See *supra* note 1087 and surrounding discussion on the current practice of broker-dealers passing fees and rebates through to customers.

¹⁵²⁶ See Council of Institutional Investors Letter at 4–5.

¹⁵²⁷ See Proposing Release, *supra* note 11, at 80336. Currently, customers' lack of timely information and certainty about the fees and rebates they incur on the execution of a trade can impact their choice of a broker-dealer for that trade.

¹⁵²⁸ For example, under the adopted amendments, it might be possible to include such information in a report to the investor following the execution of their order.

that they “believe there is more aggregate liquidity in the marketplace because of the incentives provided by exchange rebate tiers.” On the other hand, another commenter stated that when pricing is not determined until the end of the month, a “captive customer” is created, who “. . . must maintain levels of qualified trading activity or suffer an adverse economic consequence for up to an entire month’s trading activity.”¹⁵³⁴

The Commission disagrees that fee and rebate determinability are likely to alter the economic effects related to fee and rebate tiers. Many of the incentives created by current exchange pricing schedules can be implemented by creating tier-based pricing schedules that are conditioned on historic (as opposed to future) activity, and such pricing would continue to be permissible under the amended rules.¹⁵³⁵ For example, a fee schedule might base the current fee or rebate tier on the share that the exchange member had of the exchange’s total volume (or total consolidated volume) in the previous month.¹⁵³⁶ The incentives for meeting a volume tier would remain but the benefits of achieving the tier would be realized in the following month. Alternatively, a fee schedule might be based on the current month’s absolute volume on the exchange (as opposed to share of volume), up until the moment of execution, which the exchange member would presumably know.¹⁵³⁷ Again, the incentive would be approximately the same. In general, an incentive that is based on some future quantity that cannot be known with certainty today could likely be replicated by offering the certainty equivalent,¹⁵³⁸ which can be calculated

using a current or past quantity that can be known with certainty. This means that the uncertain portion of current fees is not strictly necessary to provide incentives. In this respect, any costs and benefits associated with volume-based fee tiering are not expected to change as a consequence of requiring fees and rebates to be determinable at the time of execution. Therefore, the benefits of the requirements that exchange fees and rebates be determinable at the time of execution will likely not include alleviating such “captive” customers.

One commenter stated that requiring fees to be knowable at the time of execution would make “participation in exchanges’ growth programs more expensive in the initial month of participation.”¹⁵³⁹ The Commission acknowledges that a new broker-dealer will not have a history of trading and therefore a tier schedule based on historical trading could not be implemented until the new broker-dealer has established a history; however, this history need not be long, and exchanges can cater to new and small broker-dealers by constructing tier schedules based on a short history.

One commenter stated that: “[R]equiring market participants to calculate their activity from the prior period in order to determine the volume fee and adjust their financial plans accordingly adds an unnecessary layer of complexity. The amount of effort required to understand the volume fee system, forecast volume fees for an upcoming period, and confirm that fees are indeed being calculated appropriately will especially disadvantage smaller brokers, who typically have less resources at their disposal for needless work such as this.”¹⁵⁴⁰

The Commission disagrees that the rule will add complexity. The rule removes the need for exchange members to perform forecasts in order to determine what fee they might be required to pay in a given moment. This is because, in order for a fee to be known at the time of execution as the amendments require, the fee cannot be based on activity that will happen after the execution. The Commission acknowledges, however, that fee schedules may remain complex. The rule however does not require more from small brokers than is required currently, namely it does not require them to understand the fee volume

system, forecast volume fees (indeed it eliminates the need for forecasting), or to confirm that fees are being calculated appropriately. Thus the Commission does not expect this rule to disadvantage smaller brokers, and, to the extent that forecasting future market outcomes is more difficult for small brokers, this rule may make it easier for small brokers to compete.¹⁵⁴¹

Another commenter stated that determinable fees “would also limit exchanges’ ability to incent market makers and other participants to quote at the NBBO and to do so in a large number of securities, including thinly-traded securities.”¹⁵⁴² The Commission disagrees because exchanges can continue to offer incentives based on past quoting at the NBBO in a large number of securities, including thinly-traded securities. Meaningful thresholds for pricing based on NBBO quoting activity can still be set based on historic activity, so that incentives to quote at the NBBO are expected to persist.¹⁵⁴³

Another commenter stated that, “in order to achieve th[e] stated regulatory objective” of certainty as to an order’s net fee and rebate price, and helping broker-dealers make better order routing decisions, “fees and rebates would have to be known prior to the time of execution (instead of at the point of execution, where the fee could vary based on the type of order being accessed).”¹⁵⁴⁴ The Commission acknowledges that fees can vary based on order type—for example, removing hidden liquidity may incur a different fee than removing displayed liquidity, and the broker-dealer may not know whether the order will execute against hidden liquidity prior to the time of execution. In this case, there are two sources of potential uncertainty if fees are not determinable at execution: the broker-dealer’s ultimate position on the exchange’s fee schedule, and the type of liquidity that is accessed. Fee determinability allows broker-dealers to know, prior to execution, what their fee will be for each type of liquidity that might be accessed; the type of liquidity that is accessed may not be known until

¹⁵³⁴ BMO Letter at 4.

¹⁵³⁵ Such pricing can have not just benefits, but also costs. Tier-based volume pricing, for example, is used to incentivize the concentration of order flow—i.e., a member is incentivized to route orders to a particular exchange in order to qualify for a better pricing tier. This in turn creates a potential conflict of interest because the exchange member is incentivized to route customer order flow to the exchange for the purposes of tier qualification rather than maximizing other aspects of execution quality.

¹⁵³⁶ Volume discounts like this, which are based on previous volume and then provide discounts on future purchases, have parallels in other industries (e.g., loyalty reward programs). Relative to the baseline, such a schedule would incentivize a customer to stay with an exchange for an additional month. However, there are ways exchanges might alleviate these concerns, such as a fee schedule that would induce a switch from one exchange to another.

¹⁵³⁷ Exchanges could also create alternative incentive programs for new members provided these programs are comply with the requirements of the Exchange Act.

¹⁵³⁸ A “certainty equivalent” is a term of art in economics, referring to the amount of a certain (that

is, nonrandom) payment that must be given to an economic agent so that the agent would be indifferent between this payment and some random payoff.

¹⁵³⁹ See Nasdaq Letter I at 33.

¹⁵⁴⁰ See Virtu Letter II at 11–12.

¹⁵⁴¹ See section VII.E.2.c for a discussion of the effect that fee determinability may have on competition.

¹⁵⁴² See Nasdaq Letter I at 33.

¹⁵⁴³ For example, one exchange offers additional rebates to qualified market makers if, among other things, they quote at the NBBO at least 50% of the time during the month in an average of at least 2,700 symbols per day. See Nasdaq Stock Mkt. LLC, Equity 7, Sec. 114, available at https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/nasdaq-equity-7-section_114_market_quality_incentive_programs. Similar terms can be offered based on historic (rather than future) quoting.

¹⁵⁴⁴ See Citadel Letter I at 25.

the time of execution. Resolving one source of uncertainty prior to execution (the broker-dealer's position on the exchange's fee schedule) can help broker-dealers make better routing decisions even if there remains uncertainty along other dimensions (e.g., the presence of hidden orders).

4. Acceleration and Implementation of the MDI Rules and Addition of Information About Best Odd-Lot Orders

The MDI Rules were designed to increase transparency into, among other things, the best priced quotations available in the market.¹⁵⁴⁵ The MDI Rules expanded NMS data and established a decentralized consolidation model, pursuant to which competing consolidators will eventually replace the exclusive SIPs for the collection, consolidation, and dissemination of NMS data.¹⁵⁴⁶ As discussed in section V.A, the Commission adopted a phased transition plan for the MDI Rules,¹⁵⁴⁷ which has been delayed.¹⁵⁴⁸ Because the MDI Rules are not yet implemented, information about odd-lot orders in NMS stocks is only available on individual exchange proprietary data feeds, and market participants interested in quotation information for individual odd-lot orders must purchase these proprietary feeds.¹⁵⁴⁹ Due to the delays in the MDI Rules' implementation, as discussed in the Proposing Release,¹⁵⁵⁰ the Commission is adopting an accelerated implementation schedule, with some modifications from the proposal, so that market participants, including investors, will be provided with the enhanced transparency benefits earlier than anticipated in the MDI Rules.

The amendments will result in four changes to NMS data. Two of the changes will accelerate the

implementation of specific aspects of MDI, namely the round lot definition and the inclusion of odd-lot quotations priced better than the NBBO in NMS data. This acceleration will result in realizing the economic effects of these MDI Rules sooner. The Commission acknowledges that the economic effects of the acceleration will be temporary, only lasting until the accelerated aspects of the MDI Rules would otherwise have been implemented.¹⁵⁵¹ The amendments will also impose a new requirement on the exclusive SIPs to disseminate the accelerated odd-lot information until the exclusive SIPs are retired, the effect of which is to result in the odd-lot information being disseminated sooner.¹⁵⁵² The amendments, however, present the possibility that the new requirements on the SIPs can reduce competing consolidator competition if the additional requirements dissuade some market participants from choosing to become competing consolidators, which could reduce the expected benefits of the MDI Rules.¹⁵⁵³ The amendments will also require the dissemination of a standardized best odd-lot order or BOLO. The primary economic effect of this requirement will be to provide an additional standard benchmark that market participants could use to gauge execution quality—particularly for smaller or odd-lot orders.¹⁵⁵⁴

Commenters questioned the sufficiency of the proposed 90-day implementation timeline for the acceleration of MDI Rules and the addition of the BOLO to NMS data. One commenter discussed the need for downstream programming changes for a variety of market participants: SIPs,

recipients of market data, and broker-dealers.¹⁵⁵⁵ This commenter stated that implementation is likely to take over a year. Several other commenters stated that implementation will take longer than 90 days.¹⁵⁵⁶ One commenter discussed changes required for the SIPs: "The changes required for SIPs are relatively straightforward from a conceptual perspective but will require significant undertakings before they can be implemented." This commenter then discussed the necessary steps, including: notice and lead time that data providers must give their clients; product decisions vendors need to make; development and testing for exchanges, vendors, and subscribers; traffic and capacity decisions given the change in message traffic; and communication and education for end users.¹⁵⁵⁷ Another commenter mentioned costs from converting round lots to actual share size in processing and display systems.¹⁵⁵⁸ The Operating Committee of the CTA-UTP Plans commented on the need for system design, equipment procurement, and industry testing.¹⁵⁵⁹ This commenter referenced a 2022 Odd Lots Proposal by the SIPs, which estimated a 10–12 month time frame for providing only top-of-book odd-lot quotations by the SIPs; given the additional requirements in the Proposal, the commenter estimated that implementation would take more than 12 months.

In light of these comments, the Commission is modifying the proposed compliance date for the round lot and odd-lot information definitions to extend the time for compliance. The Commission acknowledges that, all else equal, a shorter implementation timeline may result in greater total costs for the acceleration of the MDI Rules. Consistent with what commenters suggested was necessary for systems changes and testing among a variety of market participants, the adopted amendments extend the proposed compliance date for round lot definitions to approximately 12 months after the effective date of the amendments; for odd-lot information, the compliance date is extended to

¹⁵⁵¹ See *supra* section V.E for further discussion on the MDI Rules Implementation.

¹⁵⁵² See *infra* section VII.E.2.c for additional discussion of this effect. While the Rule requires the exclusive SIPs to distribute odd-lot data, the MDI Rules do not require the competing consolidators to disseminate odd-lot data. However, the MDI Adopting Release anticipated that at least one competing consolidator will do so because there would be demand for the data. See *supra* section VII.C.3.

¹⁵⁵³ See *infra* section VII.E.2.c for additional discussion of MDI acceleration and the potential effect on competition between competing consolidators. Requiring the SIPs to disseminate odd-lot information may make the SIPs more likely to become competing consolidators and give them a first-mover advantage over other competing consolidators. However, this advantage is likely to be limited because competing consolidators can offer a lower latency than the SIPs currently provide, and can offer depth-of-book data in addition to odd-lot information.

¹⁵⁵⁴ See *infra* section VII.D.6.a.ii for additional discussion on how the BOLO will make it easier for market centers and broker-dealers to compute statistics on price improvement relative to the best available displayed price, now required by amended Rule 605.

¹⁵⁵⁵ See NYSE Letter I at 7.

¹⁵⁵⁶ See FISD Letter at 3, Cboe Letter II at 11, and BlackRock Letter at 12.

¹⁵⁵⁷ See FISD Letter at 2–3.

¹⁵⁵⁸ See Cboe Letter II at 11. The commenter did not provide an estimate of these costs, only stating that, "round lot conversion to actual share size will likely require considerable work by industry participants to their processing and display systems."

¹⁵⁵⁹ See CTA-UTP Letter at 1.

¹⁵⁴⁵ MDI Adopting Release, *supra* note 10, at 18601–02, 18617; see also 17 CFR 242.600(b)(82).

¹⁵⁴⁶ See MDI Adopting Release, *supra* note 10.

¹⁵⁴⁷ See Proposing Release, *supra* note 11, at 80295 (describing the phased transition plan for the MDI Rules).

¹⁵⁴⁸ See *supra* notes 74–78 and accompanying text.

¹⁵⁴⁹ See MDI Adopting Release, *supra* note 10, at 18599. SIP data includes odd-lot transaction information but does not include odd-lot quotation information, except to the extent that odd-lot orders are aggregated into round lots pursuant to exchange rules; see also MDI Proposing Release, *supra* note 744, at 16739; MDI Adopting Release, *supra* note 10, at 18727. SIP data includes odd-lot transaction information but does not include odd-lot quotation information, except to the extent that odd-lot orders are aggregated into round lots pursuant to exchange rules; see also MDI Proposing Release, *supra* note 744, at 16739; MDI Adopting Release, *supra* note 10, at 18727.

¹⁵⁵⁰ See Proposing Release, *supra* note 11, at 80295.

approximately 18 months after the effective date.¹⁵⁶⁰

The 12-month implementation timeline for the round lot definition aligns with the compliance date for the amendments to Rule 612, allowing for the amended minimum pricing increments and new round lots to begin concurrently. This concurrence is expected to reduce the potential for operational risks and investor confusion from changing systems separately for both the amendments to Rule 612 and the acceleration of the MDI Rules, and reduces operational risks from a compressed timeline. Further, to the extent that commenters specifically discussed the timeline needed for the round lot definition implementation (as opposed to the timeline needed for both the round lot and odd-lot information definitions), no commenter stated that the round lot definition would require more than 12 months.

The longer 18-month implementation timeline for the odd-lot information definition is commensurate with the added complexity of disseminating new data fields for odd-lot quotations at multiple levels inside the NBBO. Additionally, the 18 month timeline is broadly consistent with the 10–12 month timeline that the SIPs estimated to be necessary for the 2022 Odd Lots Proposal; the longer timeline for the odd-lot information in these amendments allows for the fact that odd-lot information in these amendments includes quotations at each price level inside the NBBO, whereas the 2022 Odd Lots Proposal only included top-of-book odd-lot quotations. Further, the SIPs have been discussing the addition of odd-lot quotation information to the SIP data for several years and should be able to make the necessary adjustments to their processors in the adopted timeline. Finally, no commenter stated that the odd-lot information definition would require more than 18 months to implement. The adopted timeline allows market participants more time for each of the steps required for implementation than was initially proposed, which will address the concerns raised by commenters and help market participants to complete the tasks in a cost-effective manner. The compliance costs discussed in section VII.D.5.c reflect costs associated with the adopted timeline.

a. Round Lot Definition

As discussed in the Proposing Release,¹⁵⁶¹ the round lot definition in the MDI Rules will result in numerous economic effects, and the amendments will result in realizing these effects sooner. The primary effects stem from the MDI Rules round lot definition shrinking the NBBO for stocks priced greater than \$250.¹⁵⁶² Other effects of changing the round lot definition include increased transparency and better order execution,¹⁵⁶³ as well as any effects from potentially having more orders routed to exchanges instead of ATSs.¹⁵⁶⁴ The costs of changing the round lot definition derive from upgrading systems to account for additional message traffic and modifying and reprogramming systems.¹⁵⁶⁵ The Commission also expects that changing the round lot definition will impact the mechanics of other rules and regulations.¹⁵⁶⁶ These economic effects will be realized earlier than is currently estimated under the existing MDI timeline because this portion of the MDI Rules is currently not set to be implemented until the end of the implementation timeline for the MDI Rules. Further, because the first steps of the timeline for the MDI Rules have not been accomplished,¹⁵⁶⁷ and the Commission is uncertain when

exactly the round lot definition otherwise will be implemented, the degree of the effect of the acceleration is unknown.¹⁵⁶⁸

The Commission recognizes that the earlier implementation of the round lot definition could affect the tiered tick structure by sooner increasing the number of stocks subject to a minimum pricing increment of less than \$0.01, but the Commission does not expect this effect to be substantial. Specifically, a mechanically tighter NBBO will reduce the time weighted average quoted spread used to determine the appropriate tick increment for stocks priced greater than \$250. However, higher-priced stocks also tend to have higher spreads that are unlikely to narrow enough for the amendments to result in a smaller minimum pricing increment.¹⁵⁶⁹

As discussed in the Proposing Release,¹⁵⁷⁰ the Commission also recognizes that both the reduction in tick size and accelerating the definition of round lot will reduce the depth of liquidity at the NBBO. These effects might amplify each other in a small set of stocks. A reduction in tick size will spread liquidity across more price levels, while the implementation of the round lot definition will result in displaying smaller quotes at the NBBO. The amendments could result in this effect being amplified for stocks that trade above \$250 with spreads narrower than \$0.015 as these stocks will receive both smaller tick and smaller round lot sizes. The number of such affected stocks is likely very small.¹⁵⁷¹ The reduction in depth at the NBBO will temporarily reduce the information about liquidity available in the market for market participants who rely on public data feeds. However, the

¹⁵⁶¹ See Proposing Release, *supra* note 11, at 80330.

¹⁵⁶² See MDI Adopting Release, *supra* note 10, section V.C.1(b)(i), for the full discussion of the effect of changing the round lot size on the NBBO.

¹⁵⁶³ See MDI Adopting Release, *supra* note 10, at 18744–47 for the full discussion of the effect of changing the round lot size on transparency and execution quality. See FIA PTG Letter II at 4 for agreement from a commenter.

¹⁵⁶⁴ See MDI Adopting Release, *supra* note 10, at 18747 for the full discussion of the effect of changing the round lot size on exchange competition and order routing.

¹⁵⁶⁵ See MDI Adopting Release, *supra* note 10, at 18748 for the full discussion of the expected costs of changing the round lot size. See also *infra* section VII.D.5 for an estimation and discussion of these compliance costs as they pertain to the proposed acceleration.

¹⁵⁶⁶ See MDI Adopting Release, *supra* note 10, at 18749 for the full discussion of the effect of changing the round lot size on other rules and regulations. The round lot definition will mechanically tighten the NBBO, which is used as a reference price for numerous rules. The reference prices used for the Short Sale Circuit Breaker and LULD Plan will be affected, though these Rules will continue to function consistent with their stated purposes. The NBBO is also used as a benchmark for SRO rules such as RLPs, exchange market maker obligations, and for some order types; exchanges could propose rule changes to maintain the current operation of these rules. Finally, the round lot definition could increase the benefits of 606(b)(3) reports because it could result in an increase in the number of indications of interest in higher priced stocks that will be required to be included in 606(b)(3) reports.

¹⁵⁶⁷ See *supra* notes 74–78 and accompanying text section for a discussion of the delays.

¹⁵⁶⁸ See *supra* section V.B.1 for a discussion of the factors that affect when MDI will be implemented and a discussion of an estimate of the proposed acceleration of at least two years after the Commission's approval of the plan amendment(s) required by rule 614(e).

¹⁵⁶⁹ In the MDI Rules the Commission estimated an average reduction in quoted spreads, conditional on the round lot definition resulting in a reduction of roughly 15% for stocks priced \$250–\$1,000 and 28% for stocks priced \$1,000–\$10,000. Given the average quoted spread of \$0.35 for stocks priced \$250–\$1,000 and \$2.90 for stocks priced \$1,000–\$10,000 the expected mechanical reductions are likely not sufficient to reduce the spreads of many of these stocks to the point where they would qualify for a lower tick size in this proposal. See MDI Adopting Release, *supra* note 10, at 18743.

¹⁵⁷⁰ See generally, Proposing Release, *supra* note 11.

¹⁵⁷¹ See section V.B.3.b for analysis identifying such stocks. In particular, see *supra* note 801 identifying only two stocks—both highly liquid—that would have qualified for both the tick reduction and a reduction in the round lot as of Nov. 30, 2023.

¹⁵⁶⁰ See section VI.C.

eventual inclusion of the depth of book information in consolidated market data under the MDI Rules, once implemented, will render this effect temporary. At that point in time, consolidated market data is expected to contain depth information at more price points, which will largely counteract the effects of a reduction in displayed depth from the implementation of the round lot definition and even from a reduction in tick size.

Multiple commenters further discussed the potential interaction of the reduction in tick size and the MDI round lot definition. One commenter stated that the resulting reduction in depth at the NBBO would make the NBBO less relevant and subject to more instability: “With a lower notional value earning protected status at the NBBO, even accessing 100 shares of liquidity would likely move a stock in one of the new tiers’ multiple price levels. Furthermore, these smaller notional amounts reduce the risk taken to queue jump displayed orders by placing slightly more aggressively priced orders ahead of them.”¹⁵⁷² A separate commenter stated that the reduced liquidity at the NBBO will require investors executing large orders to, “sweep across multiple market centers, exposing them to greater execution risk. Together, these changes would reduce the depth at the NBBO, leaving it subject to greater volatility and, in turn, reducing reliability and execution quality for retail investors.”¹⁵⁷³

The Commission acknowledges that these are possibilities, but the interaction of the reduction in tick size and the MDI round lot definition is not expected to have a material impact on the NBBO of affected stocks. In order for a stock to be impacted by both the new round lot categories and the smaller tick size, it would need to have a price over \$250 with a spread below \$0.015; this implies that the percentage spread must be below 0.006%.¹⁵⁷⁴ To put this in perspective, consider the sample of all stock-days in 2023.¹⁵⁷⁵ For each stock-day, divide its TWAQS by its price to measure its percentage spread. Only 1%

of this sample has a percentage spread below 0.015%—i.e., the first percentile of the sample’s percentage spread is 2.5 times higher than the percentage spread of the stocks affected by both the new round lot categories and the smaller tick size.¹⁵⁷⁶ This implies that the affected stocks are exceptionally liquid—they are well within the first (i.e., most liquid) percentile when liquidity is measured using percentage spread. The exceptional liquidity of the affected stocks will likely protect their NBBO from material deterioration.

The Commission does acknowledge that the amendments will increase the likelihood that a 100-share order will walk the book for stocks affected by both a reduction in the tick and the round lot definition;¹⁵⁷⁷ however, the high price (over \$250 per share) of the affected stocks implies that the notional amount of such an order will be substantially larger than the notional amount of a 100-share order for a typical stock unaffected by the MDI Rules round lots. Therefore, a round lot under the new definition will continue to reflect a meaningful notional amount even with a reduced number of shares,¹⁵⁷⁸ thereby ensuring that regulatory protections for round lots—such as those governing the display, dissemination, and protection of orders under Rules 602, 604, and 611—continue to focus on orders of significant size. Likewise, the amendments will increase the likelihood that particularly large orders may need to sweep across multiple market centers; however, fixing the notional amount of an order, a high-priced stock will require fewer shares, which reduces the need to sweep across multiple market centers. Therefore, the amendments will continue to protect a meaningful notional amount at the NBBO after the round lot size is reduced for these high-priced stocks. Similarly,

the amendments will make it incrementally easier for traders to queue jump—i.e., penny—protected orders in affected stocks, but pennyning will remain difficult due to the relatively high price of the affected stocks. That is, a trader would still need to commit a relatively high notional amount to jump the queue with a protected order. Finally, the concern with pennyning is that a market participant can jump the queue by posting economically trivial price improvement; for the stocks affected by both the tick reduction and the round lot definition, however, posting a protected order that improves on the NBBO is likely to provide meaningful price improvement. To jump the queue with a protected order, a trader would need to post an order that is: (1) priced better than existing orders by \$0.005 (which is large relative to the stock’s typical spread of under \$0.015), and (2) with a \$10,000 notional value¹⁵⁷⁹ (which is larger than the notional value required to queue jump for stocks priced under \$100). Such an order would thereby require the trader to offer price improvement that is economically large relative to the costs of trading the stock, and relative to the notional amount required to jump the queue in most other stocks. Therefore, the Commission continues to expect that the acceleration of the round lot definition will protect a meaningful amount of liquidity at the NBBO for stocks receiving the tick reduction.¹⁵⁸⁰

One commenter encouraged the Commission to “comprehensively review its proposed changes to tick sizes, access fees and round lots to better evaluate how these changes together would impact liquidity.”¹⁵⁸¹ As discussed in the preceding paragraphs, the Commission expects that a very small number of stocks (two as of Nov. 30, 2023¹⁵⁸²) would be

¹⁵⁷⁶ This statistic is computed using all symbol-days in WRDS intra-day indicators for the year 2023. The sample has 2.3 million observations.

¹⁵⁷⁷ A marketable order “walks the book” if the size of the order is larger than the amount of liquidity available at the best price at a market center; the order must therefore execute against liquidity at multiple price points within the limit order book.

¹⁵⁷⁸ For example, the notional amount reflected by a round lot of 40 shares will generally be greater than \$10,000 (this is because a stock’s price must generally be greater than \$250 to be assigned a round lot of 40 shares, and $40 \times \$250 = \$10,000$). If a stock has a round lot of 100 shares, a round lot will only reflect \$10,000 of notional if the stock price is at least \$100 (so that $100 \times \$100 = \$10,000$); many stocks with a round lot of 100 shares do not have a price greater than \$100. Therefore, the lower round lot for high-priced stocks will continue to reflect a notional amount that is at least as high as the notional reflected in round lots for stocks with more common prices.

¹⁵⁷⁹ The new round lot definitions are structured so that they protect \$10,000 of notional value. See table 1 of MDI Adopting Release, *supra* note 10.

¹⁵⁸⁰ For example, suppose a trader wants to incrementally improve the NBBO by jumping ahead of a resting protected order. If the stock has a tick of \$0.005 and a round lot of 40 shares, then the trader must improve the price by \$0.005 and post an order with a notional value of at least \$10,000, *see id.* The cost of queue-jumping is therefore at least \$50 ($0.005 \times \$10,000$). Now consider a stock with a tick of \$0.01, a round lot of 100 shares, and a price of \$30 per share. The cost of queue-jumping for this stock is only \$30 ($0.01 \times 100 \times \$30$). Therefore, stocks that receive both a tick reduction and a reduced round lot under these amendments are not expected to experience more queue jumping—and consequent deterioration of the NBBO—compared to stocks that retain the penny tick and the 100-share round lot.

¹⁵⁸¹ See UBS Letter at 10.

¹⁵⁸² See *supra* note 801 identifying only two stocks—both highly liquid—that would have

¹⁵⁷² See RBC Letter at 5. Queue jumping in this context is synonymous with pennyning. See *supra* note 994.

¹⁵⁷³ See Virtu Letter II at 8.

¹⁵⁷⁴ The percentage spread measures the cost of liquidity, measured here as the spread, as a fraction of the execution price. A lower percentage spread indicates that transaction costs for liquidity demanders are a smaller fraction of the execution price. Here, $\$0.015 / \$250 = 0.00006 = 0.006\%$.

¹⁵⁷⁵ A symbol-day is the unique pair of a stock symbol and a date. For example, one observation is AMZN on December 7, 2023; a second observation is AMZN on December 8, 2023; a third is AAPL on December 7, 2023, etc.

subject to both a change in round lot size and tick size because very few stocks have both a price above \$250 (to qualify for a reduced round lot) and a TWAQS below \$0.015 (to qualify for the tick reduction). The exceptional liquidity of the stocks with both these characteristics is unlikely to be materially affected by the interaction of the tick reduction and the reduction in the round lot. With respect to the reduction in the access fee cap, the Commission expects effects of that change to be independent of the effects of the round lot definition for two reasons. First, the reduction in the access fee cap is unlikely to affect a stock's round lot size. This is because the reduction in the access fee cap—to the extent that it affects quoted prices as discussed in sections VII.B.3 and VII.2—is not expected to move quoted prices by more than one tick. Round lots, on the other hand, are determined by whether a stock is priced above \$250, \$1,000, or \$10,000; the probability that the reduction in the access fee cap affects a stock's round lot assignment is therefore miniscule. Second, the reduction in the access fee cap and the reduction in the round lot are expected to have separate but unrelated effects on the NBBO. Stocks that receive a round lot less than 100 shares are expected to have a narrower NBBO because the new round lot definition will include quotes at better prices in core data that were previously excluded from being reported because they consisted of too few shares.¹⁵⁸³ Access fees do not affect the existence of these better priced quotes with fewer shares. The reduction in the access fee cap is expected to put upward pressure on quoted spreads and therefore widen the NBBO;¹⁵⁸⁴ this effect operates at a per-share level because fees and rebates are assessed per-share, making the number of shares in a round lot irrelevant. Therefore, the Commission does not expect the round lot definition to interact with the reduction in the access fee cap.

For institutions that do not purchase proprietary feeds, the MDI Rules once implemented will result in the display of five levels of depth-of-book in NMS market data. To the extent that the amendments result in liquidity spread out across more price levels due to the round lot reduction,¹⁵⁸⁵ then these

qualified for both the tick reduction and a reduction in the round lot as of Nov. 30, 2023.

¹⁵⁸³ See MDI Adopting Release, *supra* note 10, at 18742.

¹⁵⁸⁴ See section VII.B.3 for a discussion of the effect that fees and rebates have on quoted spreads.

¹⁵⁸⁵ See *supra* note 1348 and surrounding discussion on the effect that the tick reduction is

changes would reduce the value of these NMS market data. However, the high price of stocks affected by the round lot reduction implies that the amount of visible notional liquidity will remain high relative to the notional liquidity visible for a typical stock unaffected by the MDI round lots.¹⁵⁸⁶

One commenter stated that, “the Commission failed to note how much actual volume takes place in any of the three proposed [round lot] tiers and what challenge, if any, changes to round lot definitions would address.”¹⁵⁸⁷ In the MDI Rules, the Commission estimated that approximately 1% of stocks, 3% of share volume, and 30% of dollar volume will be affected by the new round lot tiers.¹⁵⁸⁸ The Commission also discussed in the MDI Rules the effect of changing the round lot size on transparency and execution quality.¹⁵⁸⁹

The commenter further suggested that the implementation of the round lot definition could cause confusion among retail investors: “Currently, retail customers, especially those trading options, understand one option contract represents one hundred shares. Frequently, it is simply referred to as a ‘round lot.’ Changes in round lot sizes will most certainly create confusion in this area for retail investors.”¹⁵⁹⁰

The Commission acknowledges that there may be a learning curve associated with the new round lot definition. However, as discussed in the MDI Adopting Release, investor confusion will be temporary for four reasons. First, market participants already regularly trade in increments other than 100 shares.¹⁵⁹¹ Second, most NMS stocks will continue to have a round lot of 100 shares. Third, core data will be distributed with the size of the NBBO and best quotes in shares rather than in the number of round lots. Fourth, broker-dealers and other market participants will modify or develop

expected to have on the value of MDI NMS market data.

¹⁵⁸⁶ See *supra* note 1578 for an example indicating that the amount of notional liquidity reflected in a round lot will generally be higher for stocks receiving a reduction in the round lot size than stocks that retain a round lot size of 100 shares (due to the higher price of stocks receiving a round lot reduction).

¹⁵⁸⁷ See Tastytrade Letter at 22.

¹⁵⁸⁸ See MDI Adopting Release, *supra* note 10, at 18743 Table 4.

¹⁵⁸⁹ See *supra* note 1563.

¹⁵⁹⁰ See Tastytrade Letter at 22.

¹⁵⁹¹ See *supra* note 791 and surrounding text for a discussion on the interaction of the new round lot definition and options trading. It is unlikely that the new round lot definition will confuse retail investors trading in options, partially because options markets already have standard contracts on stocks with a round lot size less than 100 shares.

their systems to automatically keep track of the round-lot changes.¹⁵⁹² Further, any confusion from the accelerated round lot definition would have occurred eventually under the original MDI timeline, so the incremental effect of MDI acceleration on investor confusion is minimal.

Other commenters expressed concerns about monthly updates to stocks' round lots. Each update requires market participants to “reconfigure their investment platforms and trading systems to make any modifications effective.”¹⁵⁹³ The same commenter pointed out that, under the proposal, round lots would be assigned at discrepant intervals from tick assignments. Commenters also stated that these system updates may increase complexity and operational risk, and further contribute to investor confusion.¹⁵⁹⁴

While any periodic system update can pose a risk of glitches, the amendments assign round lots and tick sizes on the same schedule—every six months in May and November. Syncing the updates like this will reduce costs relative to the monthly round lot updates in the baseline by reducing the number of times that firms are required to “open the hood” of trading systems. To further reduce these costs and provide opportunity for industry testing, the adopted amendments incorporate a one-month gap between evaluation periods and the implementation of updated round lots and tick sizes. It is possible that the amendments to the round lot definition—*i.e.*, the less frequent evaluation periods and the lag between evaluation and implementation—may cause a stock's round lot to be less reflective of its price than would have otherwise been the case under the original MDI Rules round lot definition (*e.g.*, if a stock's price falls after the evaluation period, it may be assigned to a round lot that is too low for the next six months). This imprecision in round lot assignment, however, is unlikely to significantly reduce the benefits of the MDI Rules for two reasons. First, to the extent that a stock is assigned a round lot based on stale information, this assignment will be corrected within six months at the next evaluation date. Second, given the significant distance between the round lot thresholds (*i.e.*, \$250, \$1,000, and \$10,000), any deviation in a stock's round lot as a result of these amendments is likely to be due to stocks

¹⁵⁹² See MDI Adopting Release, *supra* note 10, at 18745.

¹⁵⁹³ See BlackRock Letter at 9–10.

¹⁵⁹⁴ See SIFMA Letter II at 34.

that are near a threshold; for these stocks, the cost of being included in the next smallest or largest tier is likely to be small.

Finally, one commenter suggested alternative price thresholds for the round lot definition; these thresholds would result in five round lot tiers.¹⁵⁹⁵ The Commission continues to believe, as stated in the MDI Adopting Release, that a five-tiered approach is unnecessarily complex, and that the adopted tiers promote a smoother transition to a price-based round lot structure.¹⁵⁹⁶

b. Including Odd-Lots in NMS Data

As discussed in the Proposing Release,¹⁵⁹⁷ the acceleration of the implementation of the MDI Rules that expand the NMS data to include odd-lot information inside the NBBO will result in sooner realizing some, but not all, economic effects of this aspect of the MDI Rules.¹⁵⁹⁸ The odd-lot information could be useful to consumers of SIP data that could use it to make better inferences about market conditions, thereby leading to investment decisions that more fully reflect market conditions and increased market efficiency. This odd-lot information could also lessen the effect of a reduction in displayed depth at the NBBO resulting from either a smaller tick size or a smaller round lot. Specifically, expediting inclusion of odd-lot data will allow individual investors whose broker-dealers subscribe to the data to visually monitor the market sooner than they would otherwise.¹⁵⁹⁹

Multiple commenters remarked on the growing importance of odd-lot activity for the overall equities market. One commenter stated that odd-lots “provide a meaningful source of liquidity across all trading sessions and stocks, representing 54.8% of all trades in the U.S. financial markets, up from 43% at

the beginning of 2020.”¹⁶⁰⁰ Similarly, another commenter stated that including odd-lot information in consolidated market data will “improve transparency and increase the usefulness of the consolidated tape given the growing prevalence of market activity in sub 100 share quantities Allowing for access to this information, as proposed, would therefore likely result in increased pre-trade transparency for both retail and institutional investors and bolster execution quality.”¹⁶⁰¹

In addition, the amendments will change the timing and magnitude of compliance costs and other costs.¹⁶⁰² One commenter estimated that quotation traffic will increase at least 35% as a result of adding odd-lot data to the SIP feeds; this estimate was based on a previous proposal by the CTA and UTP Operating Committees, which proposed a more limited inclusion of odd-lot data to the SIP feeds.¹⁶⁰³ The associated costs will include: the cost for exclusive SIPs to upgrade existing infrastructure and software to handle the dissemination of additional message traffic,¹⁶⁰⁴ the cost to SROs to implement system changes required in order to make the data needed to generate odd-lot information available to exclusive SIPs, and the cost of technological investments market participants might have to make in order to receive the SIP data.¹⁶⁰⁵

While these aforementioned economic effects of including odd-lots in NMS data will be realized sooner, the Commission does not expect that the amendments will accelerate all the effects described in the MDI Rules related to adding to NMS data odd-lot information inside the NBBO. The amendments will not accelerate the decentralized consolidation model and will therefore not accelerate the benefits from allowing some market participants to reduce data expenses required for trading by providing a reasonable alternative to some market participants to proprietary data.¹⁶⁰⁶ As such, the

amendments will also not accelerate the cost to users of proprietary data whose information advantage will dissipate somewhat. In particular, the Commission does not believe that adding the specified odd-lot information to the exclusive SIPs will result in low-latency traders substituting the exclusive SIPs for their current proprietary data usage. This is because a key component of the MDI Rules for this functionality is an expected reduction in latency of NMS data anticipated from the competing consolidator model of NMS data distribution.¹⁶⁰⁷ The exclusive SIPs are not expected to be fast enough to replace proprietary data because existing SIP latency will not be reduced or affected by this Rule. Thus, the amendments will not accelerate the benefits anticipated in the MDI Rules that pertain to using low-latency odd-lot information. Instead, the Commission expects these effects to be realized after the implementation of all MDI Rules.

Market participants who decide to receive and use odd-lot quotation information from the exclusive SIPs under these amendments will also incur costs if the acceleration results in additional systems changes when competing consolidators begin offering odd-lot information. Specifically, market participants that decide to receive odd-lot quotation information from exclusive SIPs will need to make systems changes upon implementation of the acceleration of the MDI Rules in order to receive the odd-lot quotation information. Because the data specifications of the competing consolidators are unknown and could differ from the data specification of the exclusive SIPs, market participants receiving odd-lot information from the exclusive SIPs could also need to make systems changes again to receive the odd-lot information from a competing consolidator upon full implementation of the MDI Rules.¹⁶⁰⁸ If there are significant fixed costs associated with system changes that are incurred on each change, then multiple system changes will be inefficient and could increase costs. Because market participants who receive odd-lot quotation information from the exclusive SIPs may need to make an extra systems change stemming from this Rule—one change to receive the data from the exclusive SIPs, and

¹⁵⁹⁵ See *Pragma Letter* at 9.

¹⁵⁹⁶ See *MDI Adopting Release*, *supra* note 10, at 18618. The price-based round lot structure ensures that there is \$10,000 of notional value protected under the new round lot definitions. See *supra* note 1579.

¹⁵⁹⁷ See *Proposing Release*, *supra* note 11, section V.D.5.

¹⁵⁹⁸ See *MDI Adopting Release*, *supra* note 10, section V.C.1(c)(i), for the full discussion of the effects of including odd-lot information inside the NBBO in its definition of core data. Also, the MDI Rules do not require that the competing consolidators to disseminate odd-lot information, but the Commission anticipated in the MDI Adopting Release that at least one would do so. The requirement that the exclusive SIPs disseminate odd-lot information helps ensure that the economic effects of the acceleration of the MDI Rules occur. See *infra* section VII.D.5.c for a discussion of the costs to the exclusive SIPs.

¹⁵⁹⁹ See *MDI Adopting Release*, *supra* note 10, section V.C.1(c)(i).

¹⁶⁰⁰ See *Choe Letter II* at 10.

¹⁶⁰¹ See *BlackRock Letter* at 11.

¹⁶⁰² See *MDI Adopting Release*, *supra* note 10, at 18759 for the full discussion of the costs associated with expanding core data to include odd-lot information inside the NBBO. See also *infra* section VII.D.5.c for further discussion of compliance costs.

¹⁶⁰³ See *FISD Letter* at 3. The Commission agrees that the addition of information on odd-lot quotes that are priced at or more aggressively than the NBBO may substantially increase message traffic. See *MDI Adopting Release*, *supra* note 10, at n.2019.

¹⁶⁰⁴ Multiple commenters agreed with the amendments' effect on message traffic. See, e.g., *Citadel Letter I* at 26 and *FIA PTG Letter II* at 4.

¹⁶⁰⁵ See *supra* note 1602.

¹⁶⁰⁶ *Id.*

¹⁶⁰⁷ See *MDI Adopting Release*, *supra* note 10, at 18752 n.1939.

¹⁶⁰⁸ One commenter pointed out that this duplication of effort becomes more likely if SIPs do not choose to register as competing consolidators. See *BlackRock Letter* at 12. The Commission agrees with this assessment.

potentially another change to receive the data from a competing consolidator—some market participants may decide not to implement systems changes to make use of the accelerated implementation of the odd-lot information and, instead, wait until the MDI Rules are fully implemented. This would dampen some of the benefits of accelerating the inclusion of odd-lot quotation information.

To the extent that some market participants store SIP data for various purposes (such as transaction cost analysis), the acceleration of the MDI Rules could hasten an increase in storage costs because the amount of SIP data increases with the inclusion of odd-lot data. Many factors affect these costs in total, such as the number of market participants storing SIP data, the data structures they use to store SIP data, whether these market participants will choose to store all or just some of the SIP data provided by the amendments, and the period over which the amendments will affect these storage costs. Because the Commission does not have information on how many market participants will store MDI odd-lot information and the methods they will use to do so, the Commission is unable to estimate these costs.

One commenter stated that displaying odd-lot quotes “could lead investors to expect prices that are not available.”¹⁶⁰⁹ The Commission acknowledges that there may be a learning curve associated with the dissemination of odd-lots on the SIP. However, any confusion from the accelerated dissemination of odd-lot quotes would have occurred eventually under the original MDI timeline, so the incremental effect of MDI acceleration on investor confusion is minimal. Further, as discussed in the MDI Adoption Release, the Commission acknowledges that many retail investors may not directly view the entire content of expanded core data—retail brokers may decide not to offer their customers direct access to all of the odd-lot information but may rather customize products derived from odd-lot information.¹⁶¹⁰ The provider of these customized products is expected to supply the information in a way that does not confuse the provider’s customers. To the extent that retail brokers allow some customers to directly utilize all of the odd-lot information, the customers who choose to do so will likely be sophisticated—as evidenced by their seeking out the

information—and will likely not be confused.¹⁶¹¹

c. Dissemination of Odd-Lots in SIP Data

The Amendments require the exclusive SIPs to disseminate odd-lot data.¹⁶¹² As discussed in the Proposing Release,¹⁶¹³ this requirement will help realize the benefits of accelerating the implementation of including odd-lot information in NMS data while imposing costs on exclusive SIPs and potentially on market participants.¹⁶¹⁴ The MDI Rules do not require the competing consolidators to disseminate odd-lot data. However, the Commission estimated in the MDI Rules that at least one competing consolidator will do so because there will be demand for the data.¹⁶¹⁵ These amendments, though, do not accelerate the competing consolidator model. Unlike competing consolidators, each exclusive SIP is the only distributor of the entirety of its data and may lack the incentive to disseminate the data. As a result, the Commission cannot rely on the exclusive SIPs to disseminate the odd-lot information prescribed by the MDI Rules absent a requirement to do so; the benefits of the acceleration could therefore be at risk without the Amendment to Rule 603’s requirement for the SIPs to disseminate.¹⁶¹⁶

While the inclusion of the odd-lot data could impose costs on those who receive and use exclusive SIP odd-lot data,¹⁶¹⁷ the requirement that exclusive SIPs disseminate the data could also impose costs on those who receive but do not have an interest in using odd-lot information provided in SIP data. These costs would vary based on how the exclusive SIPs decide to implement the dissemination of the MDI odd-lot information. For example, if the exclusive SIPs offer a separate data feed for odd-lot quotation information, then market participants that do not have an

interest in this information may not incur any additional costs because they would not need to subscribe to this data feed. If the exclusive SIPs instead incorporate MDI odd-lot quotation information into an existing data feed, then market participants may incur costs to update their systems to filter out the unwanted odd-lot information; the Commission is unable to estimate these costs because they would vary across market participants and depend upon each market participant’s existing infrastructure, which is unknown to the Commission. Further, such SIP data users could incur the cost of any SIP data fee increases intended to offset the costs to exchanges and exclusive SIPs.¹⁶¹⁸ However, SIP data fees did not increase when the exclusive SIPs started to include odd-lot trades.

d. Best Odd-Lot Order Definition

The amendments go beyond the MDI Rules by requiring that NMS data also include information on the best priced odd-lot orders across all markets. Including the best odd-lot order in a standardized form will offer market participants a standard benchmark, like the NBBO, to use to measure execution quality. As discussed in the Rule 605 Amendments¹⁶¹⁹ a market center may be able to internalize an order and claim price improvement relative to the NBBO even if better priced odd-lots are available at another market center. A standardized best odd-lot benchmark may give market participants that receive it valuable information for evaluating broker-dealers and market centers. Including this benchmark in NMS data allows the information to be readily available to a broad set of market participants, including those investors to whom broker-dealers choose to make this information available.¹⁶²⁰

¹⁶¹⁸ Any changes in fees for SIP data would need to be filed by the Equity Data Plans and approved by the Commission. See *supra* note 887 and accompanying text for further discussion.

¹⁶¹⁹ See Rule 605 Amendments, *supra* note 10, section IX.D.b.2.c.vii for further discussion of the benefits of disclosing execution quality benchmarked to the best available displayed price.

¹⁶²⁰ Because the amount of information disseminated as a result of the amended rule BOLO dissemination requirement would likely result in significantly less message traffic compared to the amount of information that would be disseminated as a result of the amended rule MDI odd-lot information dissemination requirement, we expect market participants will be able to receive the BOLO information required here without having to make significant system upgrades, unlike the MDI odd-lot information. Therefore, a broader set of market participants may choose to receive the BOLO from the exclusive SIPs (and later on, competing consolidators) than all of the MDI odd-lot information. Additionally, because of the lower message traffic, more broker-dealers may make

¹⁶¹¹ See MDI Adopting Release, *supra* note 10, at 18754.

¹⁶¹² See 17 CFR 242.603(b)(3) for rule text relating to this requirement under Rule 603.

¹⁶¹³ See Proposing Release, *supra* note 11, at 80332.

¹⁶¹⁴ See *infra* section VII.D.5.c for additional discussion of the costs the exclusive SIPs are expected to incur.

¹⁶¹⁵ See *supra* note 1155.

¹⁶¹⁶ The Commission recognizes that the exclusive SIPs have some incentive to offer odd-lots as indicated by the exclusive SIPs seeking comment on doing so. See, e.g., Proposal of the CTA and UTP Operating Committees Regarding Odd Lots on the SIPs (Mar. 2022), available at https://www.ctaplan.com/publicdocs/ctaplan/CTA_Odd_Lots_Proposal_2022.pdf.

¹⁶¹⁷ These costs include systems changes and data storage. See section VII.D.4.b for a discussion of these costs.

¹⁶⁰⁹ See Schwab Letter II at 36.

¹⁶¹⁰ See MDI Adopting Release, *supra* note 10, at 18753.

Currently, this information is only available to market participants who have proprietary data feeds, and even then there could be differences across market participants with these data in terms of how exactly market participants calculate the best odd-lot order (or how many proprietary feeds they include). The best odd-lot information in the NMS data will provide a standardized benchmark that reflects the best odd-lot price consolidated across all national securities exchanges and national securities associations. This benchmark may allow more market participants to better monitor the execution quality of their broker-dealers and send more trading volume to broker-dealers with better performance.¹⁶²¹ One commenter highlighted the value of this new benchmark: “. . . transparency requires that the units used to represent the range of prices available in the market match the units in which participants typically quote and trade.”¹⁶²² For market participants who receive the BOLO and typically execute small trades, the best odd-lot order will provide them more relevant information on available orders. Thus, including the best odd-lot information could enhance competition among broker-dealers leading to better trade execution and perhaps a lower cost to customers for execution services.

One commenter expressed concern that the best odd-lot order would result in “displaying locked/crossed markets.”¹⁶²³ It is possible for the best odd-lot bid to be at a price equal to or higher than the best odd-lot ask; in these cases, the best odd-lot order would show a locked or crossed market.¹⁶²⁴

information on the BOLO available to their customers than MDI odd-lot information.

¹⁶²¹ While the Commission does not expect most retail traders would engage in this sort of benchmarking due to a lack of technical capacity to do so among most retail traders, institutional traders likely have such capacity and so would engage in this type of monitoring. Institutional traders have strong incentives to monitor all aspects of transaction costs as these costs can significantly affect portfolio performance. See Amber Anand, et al., *Performance of Institutional Trading Desks: An Analysis of Persistence in Trading Costs*, 25 Rev. Fin. Stud. 557 (2012).

¹⁶²² See IEX Letter I at 31. Another commenter agreed more generally that the best odd-lot order will enhance the usefulness of odd-lot information and enhance liquidity—see Choe Letter II at 10.

¹⁶²³ See SIFMA Letter II at 34 requesting an analysis of the effect of the BOLO on the display of locked and crossed markets.

¹⁶²⁴ See *supra* note 1051 for the definition of locked and crossed markets. A locked or crossed market occurs when there is a passive buy order on one venue at a price greater or equal to the price of an existing passive sell order at another venue; the fact that these orders have not executed against each other indicates that there is a friction between the trading venues.

Academic research shows that the NBBO does get locked and crossed from time to time.¹⁶²⁵ These tend to be fleeting events.¹⁶²⁶ Because the BOLO will provide prices inside the NBBO, the BOLO will likely be crossed or locked more frequently than the NBBO. However, it is unclear what practical effect a locked or crossed BOLO would have on financial markets or those that use the BOLO. Market participants are already well versed in using the NBBO, which can be locked and crossed from time to time, so it is likely that they would use similar techniques for dealing with locked and crossed markets when, for example, benchmarking relative to the BOLO.¹⁶²⁷ Further, market participants who subscribe to proprietary data feeds already have access to information on when the best odd-lot orders may lock or cross each other; the rule amendment merely extends this information to market participants who do not subscribe to proprietary data feeds. As more market participants see the information contained in the BOLO, there may be fewer instances of locked and crossed odd-lot quotes—e.g., more market participants will have the information needed to arbitrage crossed odd-lot markets. Finally, a locked or crossed BOLO will be less disruptive than a locked or crossed NBBO because Rule 610 of Regulation NMS requires SROs to adopt rules requiring their members reasonably to avoid displaying quotations that lock or cross protected quotations.¹⁶²⁸ However, the BOLO does not establish a protected quote, and so a locked or crossed BOLO would not trigger the same reaction by SROs and their members as a locked or crossed NBBO.

Other commenters discussed the effect BOLO may have on investor confusion. Two commenters stated that: “Calculating and publishing an odd-lot NBBO risks creating significant investor confusion due to the appearance that a new benchmark is being established even though odd-lots are treated differently than round-lots under

¹⁶²⁵ See Craig W. Holden & Stacey Jacobsen, *Liquidity Measurement Problems in Fast, Competitive Markets: Expensive and Cheap Solutions*, 69 J. Fin. 1747 (2014). This paper estimates that 1.7% of trades occur when the NBBO is locked, and 0.5% of trades occur when the NBBO is crossed—see table 1, Panel A, column 4 therein. The authors conjecture that some of these instances arise due to a data issue where quotes have been canceled, but the cancellation was not recorded by the time of the trade.

¹⁶²⁶ *Id.*

¹⁶²⁷ See *Id.* for an example of one methodology used when employing market data in the presence of locked or crossed markets.

¹⁶²⁸ 17 CFR 242.610(d)(1).

Commission regulations. Rather than taking steps to prevent unnecessary investor confusion, the Commission encourages it by suggesting that the odd-lot NBBO is a ‘standard benchmark’ that could be used by investors ‘to measure the amount of price improvement they receive for the execution of their orders.’”¹⁶²⁹ The commenters continued: “The odd-lot NBBO is not a standard benchmark, since the size associated with these quotes will vary greatly as opposed to the actual NBBO, which always represents a round-lot.”¹⁶³⁰ Similarly, some commenters stated that the BOLO will not provide a useful benchmark and may instead distort price improvement statistics.¹⁶³¹

The Commission acknowledges that the BOLO is not, at present, a widely used and standard benchmark. This is likely because the requisite data is not broadly distributed and is only available to market participants who have proprietary data feeds. In contrast, the NBBO is broadly distributed in NMS data and is also more widely used as a benchmark. The Commission believes that including the BOLO in NMS data will similarly allow market participants to more easily use the BOLO as a benchmark if they choose to.¹⁶³²

The Commission also recognizes that an odd-lot price that is better than the NBBO may not reflect sufficient quantity to execute certain orders, particularly larger-sized orders, and, as a result, price improvement relative to the BOLO will be more relevant in some cases than for others. However, market participants are already well versed in interpreting nuanced benchmarks—for example, holding the round lot size constant, the NBBO may reflect a different amount of dollar liquidity based on the price of the stock. Furthermore, the size available at the NBBO of any particular stock might be a great deal more than a single round lot. This means that market participants already deal with the distinction between the price of a benchmark and the amount of shares available at that benchmark price. Indeed, while one commenter points out the challenge of comparing a 500-share order to a 10-share odd-lot,¹⁶³³ a similar challenge already exists in comparing a 1000-

¹⁶²⁹ See Citadel Letter I at 26–27, and SIFMA Letter II at 43–44.

¹⁶³⁰ *Id.*

¹⁶³¹ See JPMorgan Letter at 7, FIA PTG Letter II at 5, and ASA Letter at 6.

¹⁶³² See *infra* section VII.D.6.a.ii discussing how the BOLO will make it easier for market centers and broker-dealers to compute statistics on price improvement relative to the best available displayed price, now required by amended Rule 605.

¹⁶³³ See Citadel Letter I at 27.

share order to a 100-share round lot. This challenge is understood and handled already; market participants already know that quantity must be taken into account when making comparisons. The Commission expects that market participants who will benchmark their trades with the BOLO will generally have comparable levels of sophistication as investors who currently use the NBBO benchmark; given that users of the NBBO benchmark

are already adept at accounting for order size, these users should not be confused by the BOLO. It is important that market participants have access to a variety of benchmarks to meet their various purposes, and the BOLO will provide a useful data point for market participants to consider in addition to the NBBO.

5. Compliance Costs

Various market participants will incur one-time implementation costs as well

as ongoing compliance costs to comply with the Rule. These costs and their computations are discussed in greater detail below, but are summarized in table 15. Some of the costs are associated with the acceleration of aspects of the MDI Rules and will only represent new costs (which are not already anticipated under the MDI rules) if the exclusive SIPs do not become competing consolidators once the MDI rules are fully implemented.

TABLE 15—COMPLIANCE COST ESTIMATES

Rule	Affected entities	One-time costs	Ongoing costs	Number of entities	Total one-time costs	Total ongoing costs
612	All trading venues ^a	\$156,000		277	\$43,212,000	
612	Listing exchanges ^b	33,000	9,000	5	165,000	\$45,000
612	SIPs ^c	13,000	9,000	2	26,000	18,000
612	Broker-dealers with order entry systems ^d	33,000		1,161	38,313,000	
612	Broker-dealers with smart order routers ^e	11,000		270	2,970,000	
610	Exchanges ^f	57,000		15	855,000	
600, 603	Exchanges ^g	3,500	6,500	16	56,000	104,000
600, 603, 612	SIPs ^h	613,000	174,000	2	1,226,000	348,000
Total					86,823,000	515,000

Sources: Across estimates below, salaries are derived from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits and overhead. The burden hours estimates are based on Commission's experiences with burden estimates.

^a See Proposing Release, *supra* note 11, at 80333. The Proposing Release's estimate of \$140,000 is adjusted to \$156,000 to account for an 11.4% increase in the Producer Price Index for Data Processing, Hosting and Related Services from December 2014, when the \$140,000 estimate was first made. See U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Data Processing, Hosting and Related Services: Hosting, Active Server Pages (ASP), and Other Information Technology (IT) Infrastructure Provisioning Services [PCU5182105182105], retrieved from FRED, Federal Reserve Bank of St. Louis; available at <https://fred.stlouisfed.org/series/PCU5182105182105> (Mar. 11, 2024).

^b The \$33,000 estimate per listing exchange is based on the following calculations: \$19,950 (hourly rate for Sr. Programmer at \$399 for 50 hours) + \$6,860 (hourly rate for Sr. Systems Analyst at \$343 for 20 hours) + \$3,730 (hourly rate for Compliance Manager at \$373 for 10 hours) + \$2,940 (hourly rate for Director of Compliance at \$588 for 5 hour) \$33,000, for a total annual monetized burden of \$165,000 (*i.e.*, \$165,000 = \$33,000 × 5 listing exchanges). The \$9,000 estimate per listing exchange is based on the following calculations: (\$2,640 (hourly rate for Compliance Attorney at \$440 for 6 hours) + \$746 (hourly rate for Compliance Manager at \$373 for 2 hours)) × 4 tick size revisions per year) \$9,000, for a total annual monetized burden of \$45,000 (*i.e.*, \$45,000 = \$9,000 × 5 listing exchanges).

^c The \$13,000 estimate per listing exchange is based on the following calculations: \$4,788 (hourly rate for Sr. Programmer at \$399 for 12 hours) + \$1,715 (hourly rate for Sr. Systems Analyst at \$343 for 5 hours) + \$3,730 (hourly rate for Compliance Manager at \$373 for 10 hours) + \$2,940 (hourly rate for Director of Compliance at \$588 for 5 hour) \$13,000. The \$9,000 estimate per listing exchange is based on the following calculations: (\$2,640 (hourly rate for Compliance Attorney at \$440 for 6 hours) + \$746 (hourly rate for Compliance Manager at \$373 for 2 hours)) × 4 tick size revisions per year) \$9,000.

^d The \$11,000 estimate per system change is based on the following calculations: (\$2,005 (hourly rate for Attorney at \$401 for 5 hours) + \$2,980 (hourly rate for Compliance Manager at \$298 for 10 hours) + \$4,640 (hourly rate for Programmer Analyst at \$232 for 20 hours) + \$1,325 (hourly rate for Senior Business Analyst at \$265 for 5 hours) ≈ \$11,000. The Commission expects that broker-dealers are likely to have to undertake 3 system changes, for a total one-time expense of \$33,000. See also Transaction Fee Pilot Adopting Release, *infra* note 1644, at 5271 n.770.

^e The \$11,000 estimate per broker-dealers with smart order routers is based on the following Manager at \$298 for 10 hours) + \$4,640 (hourly rate for Programmer Analyst at \$232 for 20 hours) + \$1,325 (hourly rate for Senior Business Analyst at \$265 for 5 hours) ≈ \$11,000. See also Transaction Fee Pilot Adopting Release, *infra* note 1644, at 5274 n.796 where the cost to broker-dealers to update systems for the TSP was estimated to be \$9,000. Here, we are allowing for an additional 10 hours of Programmer Analyst time.

^f See Proposing Release, *supra* note 11, at 80333.

^g The additional \$3,500 in one-time costs and \$6,500 in ongoing costs represent a 5% addition over the costs reported in the MDI release. See *supra* note 10, section V.C.2(d)(ii) to account for the new requirement to send the necessary data to generate odd-lot information to the exclusive SIPs.

^h The \$613,000 estimate in one-time costs is based on the following calculations: \$33,000 (costs under the amendments to Rule 612 to update data specifications and internally and externally test the updates) + \$167,670 (\$83,790 (hourly rate for Sr. Programmer at \$399 for 210 hours) + \$61,740 (hourly rate for Sr. Systems Analyst at \$343 for 180 hours) + \$7,460 (hourly rate for Compliance Manager at \$373 for 20 hours) + \$5,880 (hourly rate for Director of Compliance at \$588 for 10 hours) + \$8,800 (hourly rate for Compliance Attorney at \$440 for 20 hours) + \$412,500 (costs for external services). The \$174,000 estimate in ongoing costs is based on the following calculations: \$50,301 (\$25,137 (hourly rate for Sr. Programmer at \$399 for 63 hours) + \$18,522 (hourly rate for Sr. Systems Analyst at \$343 for 54 hours) + \$2,238 (hourly rate for Compliance Manager at \$373 for 6 hours) + \$1,764 (hourly rate for Director of Compliance at \$588 for 3 hours) + \$2,640 (hourly rate for Compliance Attorney at \$440 for 6 hours)) + \$123,725 (costs for external services). See *infra* notes 1745, 1747, 1749, and 1750 and accompanying text for relevant details on these cost estimates.

a. Estimates for Rule 612

Each trading venue will have to update systems to comply with the change in tick size for some NMS stocks under the Rule 612 amendments. Due to

similarities with the changes that were required by the TSP, the Commission estimated, in the Proposing Release, that the amendments to Rule 612 would impose the same costs to trading venues

as those estimated for the TSP.¹⁶³⁴

¹⁶³⁴ See Proposing Release, *supra* note 11, at 80333.

These costs were estimated at \$140,000 in 2014 at the time of the TSP.¹⁶³⁵

Some commenters stated that the \$140,000 estimated cost to trading venues in the proposal was too low because exchanges would have to acquire additional hardware and update various systems.¹⁶³⁶ These commenters did not provide alternative estimates for the implementation costs. As discussed in the Proposing Release, this \$140,000 estimate is derived from exchange feedback on the costs associated with the TSP.¹⁶³⁷ This estimate acknowledges that the market participants may have hardware and system costs associated with the amendments. Given that those hardware and system changes are similar in nature to those associated with the TSP, and the commenters did not provide analysis to the contrary, the Commission continues to believe that this estimate is reasonable. One commenter suggested that the costs of processing and disseminating trading information may increase linearly with any increases in message traffic.¹⁶³⁸ However, estimating the costs in this manner is not possible as the Commission does not know the current costs incurred by exchanges in processing and disseminating trading information, is unaware of data sources that could provide reliable estimates, and commenters did not provide such information. As discussed in section VII.D.1.c, the Commission acknowledges that message traffic may increase due to the amendments to Rule 612, and so the costs of processing and disseminating message traffic may similarly increase. There is, however, uncertainty as to whether exchanges will need to incur additional hardware investments, and the degree of such investments, if they are needed, will likely differ from exchange to exchange, as it would depend on the capacity of their existing infrastructure to handle increased data.

To account for likely increases in the costs of computer hardware since 2014, the Commission is revising the

estimated costs from \$140,000 to \$156,000 per trading venue.¹⁶³⁹ As shown in table 15, the Commission estimates that the compliance costs associated with the amendments of Rule 612 across all trading venues are \$43 million. This estimate is computed by multiplying an estimated \$156,000 in one-time costs incurred by each trading venue to update systems to comply with the amendments to Rule 612, by the estimated number of trading venues, which is 277 trading venues.¹⁶⁴⁰

Under the amendments to Rule 612, listing exchanges will have to calculate NMS stocks' time weighted average quoted spreads and transmit their associated tick size to the exclusive SIPs. The Commission does not believe the reduction in the number of tick sizes relative to the proposal will significantly affect compliance costs since the TWAQS still needs to be calculated for each stock and assigning a stock to a tick size is not computationally or conceptually difficult once the TWAQS has been computed. Thus, the Commission is keeping the estimate for listing exchanges the same at \$33,000 per listing exchange.¹⁶⁴¹

Commenters stated that modifications to the data specifications with regards to transferring the tick size information from the listing exchanges to the SIPs

¹⁶³⁹ The Commission has updated the expected costs to \$156,000 from \$140,000 to reflect the roughly 11.4% increase in the Producer Price Index for Data Processing, Hosting and Related Services from December 2014, when the \$140,000 estimate was first made. See U.S. Bureau of Labor Statistics, *Producer Price Index by Industry: Data Processing, Hosting and Related Services: Hosting, Active Server Pages (ASP), and Other Information Technology (IT) Infrastructure Provisioning Services [PCU5182105182105]* (Mar 11, 2024, retrieved from FRED, Federal Reserve Bank of St. Louis, available at <https://fred.stlouisfed.org/series/PCU5182105182105>).

¹⁶⁴⁰ The technical aspect of a broker-dealer that internalizes customer orders updating its system to reflect the tiered tick regime is likely similar to that of an exchange or an ATS. Thus, the Commission is applying the same cost estimate for wholesalers and other broker-dealers that execute customer orders to update their systems as that applied to exchanges and ATSs. In Q1 2023 there were 16 registered exchanges, 33 ATSs, and 228 other FINRA members (including wholesalers) that executed orders off-exchange. In the first quarter of 2023, there were 277 total entities affected. See Rule 605 Amendments, *supra* note 10, at 26542.

¹⁶⁴¹ The \$33,000 estimate per listing exchange is based on the following calculations: \$19,950 (hourly rate for Sr. Programmer at \$399 for 50 hours) + \$6,860 (hourly rate for Sr. Systems Analyst at \$343 for 20 hours) + \$3,730 (hourly rate for Compliance Manager at \$373 for 10 hours) + \$2,940 (hourly rate for Director of Compliance at \$588 for 5 hour) = \$33,000. Salaries for estimates in this section are derived from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits and overhead.

would require both internal and external testing by the primary listing exchange and the SIPs.¹⁶⁴² Commenters stated that modifications to data specifications require software changes and require testing.¹⁶⁴³ The Commission anticipates that the SIPs will not have to acquire additional hardware or develop new systems in order to incorporate the minimum pricing increment indicator; they will rather need to update existing specifications. The Commission expects that the amendments to Rule 612 will require a one-time cost for updating existing systems and will not increase the cost of becoming a competing consolidator once the MDI Rules are implemented, because the amendments are not expected to increase the cost of establishing new systems. Accordingly, the Commission estimates a one-time cost of \$13,000¹⁶⁴⁴ and ongoing costs of \$9,000 per year¹⁶⁴⁵ for the two SIPs.

These estimates are based on the Commission's understanding that the listing exchanges currently have access to the data needed to calculate the time weighted average quoted spreads because such data, specifically the NBBO, are needed for the exchanges to compile Rule 605 reports.¹⁶⁴⁶ Thus, the Commission does not expect that the exchanges will incur additional costs associated with gathering data. Additionally, the listing exchanges have experience computing a share-weighted measure of average quoted spreads for their Rule 605 reports.¹⁶⁴⁷ The listing

¹⁶⁴² See generally CTA-UTP Operating Committee Letter and FIF Letter.

¹⁶⁴³ *Id.*

¹⁶⁴⁴ The \$13,000 estimate per listing exchange is based on the following calculations: \$4,788 (hourly rate for Sr. Programmer at \$399 for 12 hours) + \$1,715 (hourly rate for Sr. Systems Analyst at \$343 for 5 hours) + \$3,730 (hourly rate for Compliance Manager at \$373 for 10 hours) + \$2,940 (hourly rate for Director of Compliance at \$588 for 5 hour) = \$13,000. Salaries for estimates in this section are derived from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits and overhead.

¹⁶⁴⁵ The \$9,000 estimate per listing exchange is based on the following calculations: (\$2,640 (hourly rate for Compliance Attorney at \$440 for 6 hours) + \$746 (hourly rate for Compliance Manager at \$373 for 2 hours)) × 4 tick size revisions per year = \$9,000.

¹⁶⁴⁶ See, e.g., 17 CFR 242.605(a)(ii)(E), requiring the reporting of the number of shares executed with price improvement, and 17 CFR 600(b)(36) defining "executed with price improvement" to mean, for buy orders, execution at a price lower than the national best offer at the time of order receipt and, for sell orders, execution at a price higher than the national best bid at the time of order receipt.

¹⁶⁴⁷ See, e.g., 17 CFR 242.605(a)(ii)(A), requiring the reporting of the average quoted spread for executions of covered orders, and 17 CFR 600(b)(12), defining the average quoted spread as the share-weighted average of the difference between the national best offer and the national best

¹⁶³⁵ An exchange commenting on the Tick Size Pilot estimated \$140,000 as its expected expense to comply with the Tick Size Pilot's requirement to change the tick size for some stocks. See James G. Ongena, Chicago Stock Exchange (CHX), Comment Letter Re: File No. 4-657; Notice of Filing of the Proposed National Market System Plan to Implement a Tick Size Pilot Program On a One-Year Pilot Basis (Dec. 2014), available at <https://www.sec.gov/comments/4-657/4657-67.pdf>.

¹⁶³⁶ See FIF Letter at 9-10 and FISD Letter at 3.

¹⁶³⁷ See Proposing Release, *supra* note 11, at 80333 n.618 and surrounding text.

¹⁶³⁸ See FIF Letter at 9 ("Some FIF members would estimate that the increased server, bandwidth and other costs would be roughly proportional to the increase in message traffic").

exchanges also already have connections to the exclusive SIPs, and once competing consolidators replace the exclusive SIPs it is the competing consolidators that will have the responsibility to connect to the exchanges in order to receive data. Thus, under the MDI Rules the exchanges will not incur additional costs to connect to the competing consolidators.¹⁶⁴⁸ Additionally, the SIPs have experience distributing regulatory data and so the costs represent those of adding the tick size to existing data. Consequently, the Commission expects that having the listing exchange compute time weighted average quoted spreads and transmit the associated tick to the exclusive SIPs currently, or to the competing consolidators once the exclusive SIPs are discontinued, will require listing exchanges to modify existing systems, rather than build or acquire new systems or hardware.

The Commission expects that broker-dealers with order entry systems will need to modify their existing systems to comply with the tick size changes and will not need to acquire new hardware or develop new systems for this specific aspect of the adopted rule. In the Proposing Release, the Commission had estimated the cost of a broker-dealer system change at \$11,000.¹⁶⁴⁹ One commenter stated that for most firms a significant technological build will not be needed,¹⁶⁵⁰ other commenters stated that broker-dealers would have to undertake significant systems work, or acquire additional hardware, as a result of the amendments to Rule 612, specifically if there is a significant increase in message traffic.¹⁶⁵¹ The message traffic implications and costs are discussed in section VII.D.1.c. This section deals specifically with modifications to broker-dealer order entry systems.

One commenter stated that the \$11,000 estimate was too low because

bid at the time of order receipt or, for order executions of midpoint-or-better limit orders, the difference between the national best offer and the national best bid at the time such orders first become executable. Additionally, some listing exchanges have issued white papers that include statistics based on time weighted average quoted spreads. See, e.g., Nasdaq Intelligent Tick, *supra* note 150, Chart 3 and Choe Proposal, *supra* note 150, Exhibit 1.

¹⁶⁴⁸ See MDI Adopting Release, *supra* note 10, at 18612 n.1133 and surrounding text. The costs for the competing consolidators to connect to the exchanges is accounted for in the MDI Rules and thus would not represent costs associated with this proposal.

¹⁶⁴⁹ See Proposing Release, *supra* note 11, at 80332–34.

¹⁶⁵⁰ See Apex Letter at 15.

¹⁶⁵¹ See FIF Letter at 9, TradeStation Letter at 6, Citigroup Letter at 2, and FISD Letter at 3.

the proposed amendments to Rule 612 would necessitate additional expenses in order to update “their order management, execution management, customer trading, middle-office trade processing, reporting, settlement, surveillance and compliance systems.”¹⁶⁵² In the Proposing Release, when the Commission estimated the cost of a broker-dealer system change at \$11,000, it assumed that a single system change would be needed in response to the Rule 612 amendments.¹⁶⁵³ In light of the various functions described by the commenter which would need to be updated, the Commission is revising the estimated one-time cost to broker-dealers to \$33,000 per broker-dealer with an order-entry system as reported in table 15.¹⁶⁵⁴ The revised estimate stems from the expectation that broker-dealers are more likely to have to undertake three system changes, rather than one,¹⁶⁵⁵ although the Commission recognizes that these costs could be greater if additional hardware investment is needed.

The Commission estimates that there are 1,161 broker-dealers with order entry systems.¹⁶⁵⁶ Thus, the Commission estimates that the amendments will lead to a one-time aggregate cost of around \$38.5 million (*i.e.*, \$38.5 million $\approx$ \$33,000 $\times$ 1,161) across broker-dealers with order entry systems to update their systems to account for the new tick sizes.

The Commission expects that broker-dealers with smart order routers will also need to modify their existing systems to comply with the tick size changes and will not need to acquire new hardware or develop new systems. The Commission estimates a one-time cost of \$11,000 to broker-dealers operating smart order routers.¹⁶⁵⁷ These

¹⁶⁵² See FIF Letter at 9.

¹⁶⁵³ See Proposing Release, *supra* note 11, at 80332.

¹⁶⁵⁴ See table 15 note d.

¹⁶⁵⁵ The Commission believes that the order management, execution management, and customer trading functions highlighted by the commenter are sufficiently similar to be covered under a single system change. The middle-office trade processing, reporting, and settlement functions constitute another system change. Surveillance and compliance systems constitute a third system change.

¹⁶⁵⁶ Using CAT data from December 2023, the Commission calculated the total number of unique Central Registration Depository Numeric Identifiers “CRDs” that originated an order to estimate the number of entities with an order entry system.

¹⁶⁵⁷ The \$11,000 estimate per broker-dealers with smart order routers is based on the following Manager at \$298 for 10 hours) + \$4,640 (hourly rate for Programmer Analyst at \$232 for 20 hours) + \$1,325 (hourly rate for Senior Business Analyst at \$265 for 5 hours) $\approx$ \$11,000. See also Securities Exchange Act Release No. 84875 (Dec 19, 2018), 84 FR 5202 (Feb 20, 2019) (“Transaction Fee Pilot

broker-dealers already have systems that can adjust for tick sizes that change around the \$1.00 threshold. Thus, the Commission expects that they will modify existing systems rather than build new systems. Any broker-dealer that will need to build new systems will likely incur costs greater than \$11,000 to do so. One commenter stated that significant system changes and hardware costs would also be required by broker-dealers operating smart order routers due to an increase in message traffic.¹⁶⁵⁸ The Commission acknowledges that the one-time costs to broker-dealers operating smart order routers may be greater than estimated if additional hardware investment will be required.¹⁶⁵⁹

The Commission estimates an upper bound of 270 broker-dealers operating smart order routers.¹⁶⁶⁰ This number provides an upper bound as it assumes that all entities with direct connections to exchanges or ATSs use a smart order router, which is likely an over-estimate. Aside from potential additional costs due to increased message traffic, the Commission thus estimates a one-time cost of \$3.0 million (*i.e.*, \$3.0 million $\approx$ \$11,000 $\times$ 270) for market participants to update smart order routers.¹⁶⁶¹ If fewer than 270 broker-dealers operate their own smart order routers, then the \$3.0 million estimate is likely higher than the aggregate cost for these broker-dealers to adjust their order routing systems to comply with these amendments.

Further, the Commission believes that broker-dealers operating smart order routers already subscribe to SIP data and will subscribe to consolidated market data products once the competing consolidators become operative. Thus, they will not incur a separate data expense to receive the regulatory messages necessary to comply with Rule 612 amendments. The Commission also assumes that system updates will impose a similar cost on larger and smaller entities given that, once code is written, scaling it up is relatively inexpensive.

Adopting Release”) at 5274 n.796 where the cost to broker-dealers to update systems for the TSP was estimated to be \$9,000. Here, we are allowing for an additional 10 hours of Programmer Analyst time.

¹⁶⁵⁸ See FIF Letter at 9.

¹⁶⁵⁹ See *supra* section VII.D.1.c for additional discussion about costs to market participants stemming from increases in message traffic.

¹⁶⁶⁰ This number is estimated by counting the number of unique CRDs that submitted an order directly to an exchange or ATS in the month of December 2023.

¹⁶⁶¹ The Commission also expects there may be other costs associated with updating systems to account for an increase in message traffic resulting from the new tick sizes. See *supra* section VII.D.1.c for additional discussion.

Lastly, the Commission recognizes that Rule 612 amendments could increase the overall implementation costs of the MDI Rules. In particular, stocks that will become less tick-constrained as a result of the smaller tick size following these amendments could have more odd-lot quotes inside the NBBO than anticipated when the Commission adopted the MDI Rules.¹⁶⁶² As a result, the costs to SROs and competing consolidators of collecting, transmitting, consolidating, and disseminating odd-lot information will be greater than those described in the MDI Rules. The Commission is unable to provide an estimate of this cost because it would require predicting a complex interaction between behavior changes from multiple types of market participants and the resulting effect on the number of ticks inside the NBBO and the volume of odd-lots submitted inside the NBBO. However, the cost increase may not be significant, because the Commission generally estimates that the infrastructure cost increases associated with an increase in message traffic from the amendments to be approximately 1%.¹⁶⁶³

Multiple commenters stated that many broker-dealers, particularly those with retail customers, would have to incur additional costs for investor education and customer assistance in order to handle any investor confusion arising from the amendments to Rule 612.¹⁶⁶⁴ One commenter specifically mentioned that the amendments to Rule 612 would complicate “good-till-cancelled” orders (“GTC orders”) as the orders could be placed under one tick size and could still be active after a tick size change.¹⁶⁶⁵ This scenario is unlikely given that there will be a period of one-month between end of the evaluation period and the tick size implementation during which market participants will be able to know which stocks will be changing their tick size. For an issue to arise, the GTC order would have to be in place over the course of that month and the trader would have to be unaware of the upcoming tick size change. Retail facing broker-dealers will likely implement some method of notifying their customers that the tick size for some stocks will change following the end of the evaluation period. To the extent to

which customer confusion causes these costs to materialize, the Commission would expect that these costs would likely be greater in the time immediately following the implementation of the amendments, and they would decrease over time as investors become accustomed to the new tick size regime.

b. Estimates for Rule 610

As in the Proposing Release, the Commission estimates a \$57,000 one-time cost to exchanges to comply with changes to Rule 610.¹⁶⁶⁶ This estimate assumes that exchanges will combine in the same Rule 19b-4 filing their proposals to amend their fees and rebates and make fees and rebates determinable at the time of execution, and that this process will not increase the cost of those filings. The Commission recognizes that if these filings are not efficiently combined, then the costs to exchanges could be higher than \$57,000. The Commission estimates also assume that LTSE will not file a proposed rule change with the Commission because it does not currently charge access fees or offer rebates, but that the other 15 exchanges will file proposed rule changes. If so, these amendments will lead to an estimated one-time total cost of \$855,000 across exchanges to comply with Rule 610.¹⁶⁶⁷

c. Estimates for Rules 600 and 603

The exclusive SIPs and exchanges will incur compliance costs associated with accelerating the inclusion of odd-lot data inside the NBBO in SIP data, adding the BOLO to SIP data, and accelerating the implementation of the round lot definitions as amended in this release. The round lot definitions (but for amendments to them in this release) and the inclusion of odd-lot data inside the NBBO were both parts of the MDI Rules. Thus, the amendments will accelerate the compliance costs associated with these aspects of the MDI Rules. One difference is that the MDI Rules anticipated that these changes to NMS data would occur after the competing consolidator model was up and running. Thus, the MDI Rules did not anticipate that the exclusive SIPs would incur such costs unless they

chose to become competing consolidators. The addition of the best odd-lot order to the SIP data was not part of the MDI Rules and will thus be a new cost under the amendments. Accordingly, the discussion below distinguishes costs to the exclusive SIPs in terms of those included in the MDI Rules and new costs from these amendments.

The Commission estimates a one-time cost of \$3,500 and ongoing costs of \$6,500 per year for at least two years for exchanges to comply with the amendments to Rules 603 and 600.¹⁶⁶⁸ This estimate accounts for the acceleration of the necessary data to generate the odd-lot information, including the best odd-lot order, and transmit this information to the exclusive SIPs. The costs reported here account for an increase in the costs associated with the MDI Rules that will require the exchanges to transmit to competing consolidators all of the data necessary for generating consolidated market data.

Consequently, for the exchanges, the costs associated with providing the exclusive SIPs with odd-lot information will represent an acceleration of costs anticipated in the MDI Rules rather than new costs, with a few differences. First, the odd-lot information will be transmitted to the exclusive SIPs as opposed to the competing consolidators. Second, the ongoing costs of these amendments will be incurred only until the exclusive SIPs are retired, which the Commission estimates will be at least two years after the Commission’s approval of the plan amendment(s) required by Rule 614(e).

Compliance with the amendments to Rules 603 and 600 will require the exclusive SIPs to develop, operate, and maintain systems to collect and disseminate the odd-lot information inside the NBBO as well as the best odd-lot order. The Commission expects that these costs will primarily consist of costs that an exclusive SIP would incur if it were to convert to a competing consolidator. Thus, for exclusive SIPs that would have become competing consolidators in the absence of these amendments, initial compliance costs

¹⁶⁶² This is a result of a smaller tick size allowing liquidity to spread over more levels, reducing the depth at each level and could increase the number of odd-lot quotes at each level. See *supra* section VII.D.1.b for additional discussion.

¹⁶⁶³ See *supra* note 1334 and accompanying text.

¹⁶⁶⁴ See, e.g., FISD Letter at 2, TastyTrade Letter at 19, and TradeStation Letter at 6.

¹⁶⁶⁵ See TradeStation Letter at 6.

¹⁶⁶⁶ See Proposing Release, *supra* note 11, at 80333.

¹⁶⁶⁷ The Commission does not expect other market participants to incur significant incremental costs associated with the change in the access fees and rebates. As shown in table 4, market participants deal with over 100 fee changes per year across all exchanges and thus it is reasonable to expect that one fee change by the exchanges to bring their fees into compliance with these amendments would represent an economically trivial incremental cost to these market participants.

¹⁶⁶⁸ In the MDI Adopting Release, *supra* note 10, at 18764, the Commission estimated costs to the exchanges of collecting and transmitting the necessary information to the competing consolidators to be approximately \$70,000 in one-time costs and approximately \$130,000 in ongoing costs. The additional \$3,500 in one-time costs and \$6,500 in ongoing costs represent a 5% addition over the costs in the MDI release to account for the new requirement to send the necessary data to generate odd-lot information to the exclusive SIPs (*i.e.*, $\$3,500 \approx \$70,000 \times 0.05$ and $\$6,500 \approx \$130,000 \times 0.05$). See *infra* note 1841 and accompanying text.

represent an acceleration of costs under the MDI Rules, rather than new additional costs. Further, the ongoing costs for exclusive SIPs to comply with Rules 600 and 603 will be incurred only until the exclusive SIPs are retired, after which time these costs will consist of ongoing costs that were previously accounted for in the MDI Rules. The Commission estimates that the exclusive SIPs will incur a one-time cost of approximately \$613,000 and ongoing costs of approximately \$174,000 per year.¹⁶⁶⁹

The Commission recognizes some uncertainty in the assumption that exclusive SIPs will become competing consolidators. If one or both exclusive SIPs are not planning to become competing consolidators under the MDI Rules, and the amendments do not change their plans, then the estimated initial and ongoing costs in table 15 represent new costs associated with the amendments. If the amendments were to prompt one or both exclusive SIPs to become competing consolidators, when they otherwise would not have done so, then the costs in table 15 underestimate the total costs of these SIPs becoming competing consolidators. In the MDI Rules, however, the Commission anticipated that both exchanges operating exclusive SIPs would have strong incentives to enter the competing consolidator market.¹⁶⁷⁰ The amendments require that the exclusive SIPs build out the capacity to disseminate aspects of the data required by the MDI Rules. This could increase the likelihood that the exclusive SIPs will choose to become competing consolidators because they will already have implemented some of the technology needed to comply with the requirements of a competing

consolidator, thereby lowering their subsequent cost of becoming a competing consolidator. In this context, the Commission continues to expect that the exclusive SIPs will become competing consolidators, and the estimated costs in table 15 largely represent costs that the exclusive SIPs would have borne in the process of becoming competing consolidators.

The Commission recognizes that the amendment to Rule 600 could increase the initial costs of becoming a competing consolidator as well as the ongoing costs of competing consolidators, but the Commission believes that such costs are already accounted for in the MDI Rules.¹⁶⁷¹ In particular, competing consolidators could incur additional compliance costs to estimate and disseminate the best odd-lot order. To the extent such costs are not accounted for in the MDI Rules, they will likely be a small fraction of the compliance costs of including odd-lot information in SIP data stated above. Indeed, the competing consolidators will already have the information necessary to calculate the BOLO, so most of the cost incurred under the amendment to Rule 600 will be the initial cost of coding the information and the cost of processing and monitoring that code in real time.

6. Interactions With Recently Adopted Rules

The Commission acknowledges that the effects of any final rule may be impacted by recently adopted rules that precede it. Accordingly, each economic analysis in each adopting release considers an updated economic baseline that incorporates any new regulatory requirements, including compliance costs, at the time of each adoption, and considers the incremental new benefits and incremental new costs over those already resulting from the preceding rules. We discuss below economic effects stemming from interactions between the final rule and other recently adopted rules.¹⁶⁷²

a. Amendments to Rule 605

Commenters have specifically questioned the Commission's analysis of interactions between the four EMS Proposals,¹⁶⁷³ of which only the Rule

605 Proposal has been adopted.¹⁶⁷⁴ Because the amendments to Rule 605 were not yet adopted at the time of the Proposing Release and were thus not a part of the baseline in the Proposing Release,¹⁶⁷⁵ the economic effects described in the Proposing Release may differ from those described here to the extent those effects change due to the amendments to Rule 605. Below, we discuss specific impacts the amendments to Rule 605, which is now part of the baseline, may have on the expected economic effects of the final rules compared to description of those effects in the Proposing Release, as well as the impact the final rules may have on the effects of amended Rule 605. In response to comments, we also consider whether the amended Rule 605 data is needed to assess the impact of the final rules. Overall, the inclusion of the amendments to Rule 605 in the baseline does not significantly change the costs and benefits of the final rules, and the final rules adopted herein have significant benefits even taking into account the adopted amendments to Rule 605 as part of the baseline.

i. Impact of Amended Rule 605 on the Final Rules

First, the Commission considers whether the amendments to Rule 605, which are now part of the baseline, may have affected certain benefits of the final rules compared to how those benefits were described in the Proposing Release. Some commenters stated that the four EMS Proposals, including the amendments to Rule 605 and these final rules, have similar objectives, such that the benefits of each rule may be overlapping, and that therefore each successive rule would have fewer benefits than were described in each proposing release.¹⁶⁷⁶ However, the

¹⁶⁶⁹ The \$613,000 estimate in one-time costs is based on the following calculations: \$33,000 (costs under the amendments to Rule 612 to update data specifications and internally and externally test the updates; see *supra* note 1651, see also section VII.D.5.a) + \$167,670 (\$83,790 (hourly rate for Sr. Programmer at \$399 for 210 hours) + \$61,740 (hourly rate for Sr. Systems Analyst at \$343 for 180 hours) + \$7,460 (hourly rate for Compliance Manager at \$373 for 20 hours) + \$5,880 (hourly rate for Director of Compliance at \$588 for 10 hours) + \$8,800 (hourly rate for Compliance Attorney at \$440 for 20 hours) + \$412,500 (costs for external services)). The \$174,000 estimate in ongoing costs is based on the following calculations: \$50,301 (\$25,137 (hourly rate for Sr. Programmer at \$399 for 63 hours) + \$18,522 (hourly rate for Sr. Systems Analyst at \$343 for 54 hours) + \$2,238 (hourly rate for Compliance Manager at \$373 for 6 hours) + \$1,764 (hourly rate for Director of Compliance at \$588 for 3 hours) + \$2,640 (hourly rate for Compliance Attorney at \$440 for 6 hours)) + \$123,725 (costs for external services). See *infra* notes 1830, 1832, 1834 and 1835 and accompanying text for relevant details on these cost estimates.

¹⁶⁷⁰ See MDI Adopting Release, *supra* note 10, at 18761.

¹⁶⁷¹ See *supra* section VII.D.5 for further discussion of how or whether this requirement would alter the compliance costs of competing consolidators.

¹⁶⁷² As explained above, the Commission considers recently adopted rules, but not recent proposals, as part of its baseline against which it measures the economic effects of its rules. See *supra* section VII.C and notes 1034 and 1047.

¹⁶⁷³ See *supra* section II for further discussion.

¹⁶⁷⁴ See Rule 605 Amendments, *supra* note 10.

¹⁶⁷⁵ See *supra* note 1672.

¹⁶⁷⁶ See, e.g., Virtu Letter II at 55–56 (stating “that the proposals are designed to accomplish the same overarching goals,” that “each rule ignores the possibility that the other three rules may already address the Commission’s concerns,” that “the expected benefit the Commission believes its rules will achieve is overlapping,” and that an important policymaking question that arises from these overlapping objectives is whether “the estimated benefits [are] purely additive”) see also SIFMA Letter II at 100 (stating that “the Proposed Rules may, each individually, largely affect the same aspects of equity markets, including the economics of liquidity provision, spreads (particularly for retail investors), and costs (particularly for wholesalers)”), Virtu Letter II at 20 (stating that, if any of the other rules (including Rule 605) are successful at achieving their stated purpose, “competition would be enhanced without the Proposed [Tick Size] Rule (and its significant risks and costs) and the claimed benefits of the Proposed Rule are overstated”); Virtu Letter III at 2 (stating

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final rules address different and significant issues in the national market system distinct from those addressed in Rule 605.¹⁶⁷⁷ The final rules have benefits, such as certain improvements in market quality for stocks that receive a smaller tick size, lower trading costs for liquidity demanders in certain stocks that experience a reduction in their access fees, and increased transparency and reduced complexity of exchange access fees and rebates, that are distinct from the benefits resulting from the amendments to Rule 605 and could not conceivably have been achieved through the amendments to Rule 605.¹⁶⁷⁸ While, as one commenter stated,¹⁶⁷⁹ both rules may improve competition, the issues being addressed in these final rules and in the amendments to Rule 605, and the mechanisms used to address them, differ significantly, making these benefits additive rather than overlapping. For example, the amendments to Rule 605 will increase competition among trading venues through greater transparency,¹⁶⁸⁰ while these final rules will increase competition between orders on trading venues in some stocks by removing barriers to sub-penny quoting. Both of these competitive effects are expected to improve execution quality, but through different mechanisms and independently of one another.

In addition, the adoption of the amendments to Rule 605 may, to some extent, enhance certain benefits of the final rules compared to the benefits described in the Proposing Release. Specifically, the final rules are expected to increase the extent to which broker-dealers make decisions based on execution quality.¹⁶⁸¹ At the same time, the amendments to Rule 605 improve broker-dealers' access to information about the execution quality of market centers.¹⁶⁸² Thus, to the extent that

that the amendments in the Rule 605 Amendments may "otherwise address any concerns that formed the impetus for the [EMS] Proposals," including the Proposing Release).

¹⁶⁷⁷ See *supra* section II for further discussion.

¹⁶⁷⁸ See *supra* sections VII.D.1.b, VII.D.2, and VII.D.3 for further discussion of the benefits of the final rules and *supra* section VII.C.5 for a discussion of the benefits resulting from the amendments to Rule 605.

¹⁶⁷⁹ See *supra* note 1676.

¹⁶⁸⁰ See Rule 605 Amendments, *supra* note 10, at 26543–75.

¹⁶⁸¹ Specifically, the increase in transparency in exchange access fees and rebates in the final rules is expected to decrease the extent to which broker-dealers' routing decisions are based on access fees and rebates and increase the extent to which these decisions are based on other factors, including the execution quality of market centers. See *supra* section VII.D.3.

¹⁶⁸² For example, the amendments to Rule 605 increase the granularity of time-to-execution buckets, which will improve broker-dealers' ability

broker-dealers base their order routing decisions more on execution quality as a result of the final rules, the improved access to market center execution quality information under amended Rule 605 will help facilitate those decisions.¹⁶⁸³

The adopted amendments to Rule 605 may also, in certain circumstances, cause the benefits of the final rules stemming from transparency to be somewhat lower than those described in the Proposing Release; however, the Commission expects these impacts to be minor. Specifically, in the Rule 605 Amendments, the Commission anticipated that the increase in transparency and competition on the basis of execution quality as a result of the amendments to Rule 605 might make broker-dealers less likely to route customer orders based on exchange fees and rebates.¹⁶⁸⁴ At the same time, the amendments to Rule 610 that would make fees and rebates determinable at the time of execution are expected to reduce broker-dealer conflicts of interest related to fees and rebates.¹⁶⁸⁵ Likewise, the lower access fee cap is also expected to reduce broker-dealer conflicts of interest.¹⁶⁸⁶ If the amendments to Rule 605 result in exchange fees and rebates becoming less important for broker-dealer customers' order routing decisions, the benefits resulting from a reduction in conflicts of interest under the final rules—caused by reducing the access fee cap and increasing the transparency of exchange fees and rebates—may be reduced compared to how they were described in the Proposing Release. However, this reduction in benefits, compared to the Proposing Release, is likely to be minor, for several reasons, and the Commission still expects the benefits described above, in comparison to the baseline, to be realized. First, not all orders are subject to and directly benefit from increased transparency under amended Rule 605.¹⁶⁸⁷ Second, the amended Rule

to compare execution speeds across trading venues and route their orders accordingly. See Rule 605 Amendments, *supra* note 10, at 26561.

¹⁶⁸³ See Rule 605 Amendments, *supra* note 10, at 26544–26547 (discussing the impact of the amendments to Rule 605 on competition between broker-dealers).

¹⁶⁸⁴ See Rule 605 Amendments, *supra* note 10, at 26586.

¹⁶⁸⁵ See *supra* section VII.D.3 for a discussion of the economic effects of requiring exchange fees and rebates to be determinable at the time of execution.

¹⁶⁸⁶ See *supra* section VII.D.2 for a discussion of the economic effects of reducing the access fee cap on conflicts of interest.

¹⁶⁸⁷ For example, in the Rule 605 Amendments, an analysis of Tick Size Pilot data found that, between April 2016 and March 2019, approximately 25% of orders were flagged as having special handling requests, which would exclude them from

605 reporting requirements only require reporting by larger broker-dealers; while these broker-dealers handle the vast majority of customer accounts, they only handle around 60% of customer order flow in terms of number of orders.¹⁶⁸⁸ Therefore, the amendments to Rule 605 are not expected to directly impact customer order routing decisions for a significant subset of order flow,¹⁶⁸⁹ such that the final rules lowering the access fee cap and increasing the transparency of exchange fees and rebates are still expected to have additional benefits above and beyond those of the amendments to Rule 605.

Third, the Commission anticipated that the amendments to Rule 605, by expanding the scope of covered orders to include odd-lots, would encourage broker-dealers to compete for these orders on the basis of execution quality.¹⁶⁹⁰ The final rule's requirement that the exclusive SIPs disseminate odd-lot data¹⁶⁹¹ is expected to accelerate the benefits of accelerating the implementation of including odd-lot information in NMS data,¹⁶⁹² which may include facilitating better execution quality for these orders by broker-dealers who newly have access to information about odd-lots.¹⁶⁹³ To the extent that the increase in competition for odd-lot execution quality under amended Rule 605 has already incentivized broker-dealers to increase their usage of existing sources of odd-lot data (such as proprietary data feeds) in routing decisions, this would reduce the number of broker-dealers without pre-existing access to odd-lot information and thus may reduce the benefits from

the scope of Rule 605 reporting requirements. See Rule 605 Amendments, *supra* note 10, at 26514.

¹⁶⁸⁸ The Rule 605 Amendments estimated that only 85 out of 1,245 broker-dealers with at least one customer account would qualify as a larger broker-dealer and therefore be required to prepare Rule 605 reports; however, these 85 broker-dealers are responsible for more than 98% of customer accounts and more than 60% of customer orders. See Rule 605 Amendments, *supra* note 10, at 26428 (table 13).

¹⁶⁸⁹ The Rule 605 Amendments acknowledge that, if smaller broker-dealers are also incentivized to produce execution quality information for their customers as a result of the expanded scope of Rule 605 to include larger broker-dealers, the benefits of increased competition could indirectly extend to smaller broker-dealers as well. See Rule 605 Amendments, section IX.C.1.(D)(1), *supra* note 10, at 26428.

¹⁶⁹⁰ See Rule 605 Amendments, *supra* note 10, at 26552.

¹⁶⁹¹ See 17 CFR 242.603(b)(3) for rule text relating to this requirement under Rule 603.

¹⁶⁹² See *supra* section VII.D.4.c.

¹⁶⁹³ See *supra* note 1151 and corresponding text. See MDI Adopting Release, *supra* note 10, at 18753, stating that "if a broker-dealer previously did not have access to odd-lot information, then a broker-dealer receiving the additional information may help facilitate best execution of its clients' orders."

disseminating odd-lot information in the SIP as described in the Proposing Release. However, if broker-dealers that rely on odd-lot information from proprietary data feeds are able to reduce their costs by switching to using odd-lot information from the SIP,¹⁶⁹⁴ this would result in benefits even to those broker-dealers with pre-existing access to odd-lot information.¹⁶⁹⁵

ii. Impact of the Final Rules on Amended Rule 605

In addition to the impact amended Rule 605 may have on the effects of the final rules compared to those described in the Proposing Release, the Commission also considered the reverse, *i.e.*, whether the final rules may impact the effects of amended Rule 605 going forward. Specifically, the final rules will enhance certain benefits and reduce certain costs of amended Rule 605. As discussed above, the amendments accelerating MDI Rules related to including information about odd-lots into SIP data will accelerate the realization of the benefits of this information.¹⁶⁹⁶ In turn, the MDI Rules increase the usefulness of price improvement statistics included in amended Rule 605 using the best available displayed price as the benchmark by providing market participants with price improvement information relative to a benchmark price that more accurately reflects liquidity available in the market.¹⁶⁹⁷ Increasing the usefulness of price improvement statistics promotes incentives for reporting entities to seek out or offer price improvement relative

to the best displayed price, taking into account all available displayed liquidity (including odd-lots).

In addition, the value of reporting price improvement relative to the best displayed price relative to the NBBO, now required by amended Rule 605,¹⁶⁹⁸ will increase for those stocks for which the reductions in the tick size in the final rules result in an increase in the number of price levels within the spread.¹⁶⁹⁹ If there are more price increments within the spread, it is more likely that the best displayed price will be different from the NBBO. Similarly, the availability of a greater number of price increments within the spread increases the value of the separate reporting of execution quality information for midpoint-or-better NMLOs¹⁷⁰⁰ because the prevalence of these orders is likely to increase.¹⁷⁰¹ Furthermore, if a reduction in the tick size results in a reduction of depth at the NBBO, this increases the usefulness of the recently adopted measures of size improvement included in amended Rule 605 reports.¹⁷⁰² Finally, the final rule requiring NMS data to also include information on the best priced odd-lot orders across all markets¹⁷⁰³ will reduce ongoing compliance costs related to compiling information about price improvement relative to the best displayed price under amended Rule 605.¹⁷⁰⁴ This is because reporting entities will be able to access standardized information about the best odd-lot order, rather than needing to use odd-lot trade and quote data to calculate the best odd-lot order themselves.¹⁷⁰⁵

One commenter stated that because of the proposed amendments to the definition of “categorized by order size” in Rule 605,¹⁷⁰⁶ subsequent changes to the definition of tick sizes and round lots would “create customer confusion” regarding their Rule 605 reporting requirements.¹⁷⁰⁷ The Commission does not believe that market centers and brokers-dealers will be confused about their reporting obligations under amended Rule 605 as a result of the new round lot definition and the new minimum tick size under the final rules. The rule texts for both amended rules are clearly stated. Further, the use of notional value in the order size categories under the adopted amendments to Rule 605 will help end users of these reports understand the effect of a change in round lot size for a security because a notional value range will remain constant even if the size of a round lot changes.¹⁷⁰⁸

iii. Delaying the Final Rules Until Amended Rule 605 Data are Available

Third, in response to comments, the Commission considers whether adoption of the final rules should be delayed until amended Rule 605 data are available.¹⁷⁰⁹ Several commenters suggested that the Commission wait to adopt the final rules until after the amended Rule 605 data are available so that amended Rule 605 data could be

cost of preparing Rule 605 reports may be higher for these broker-dealers as a result of the final rules. *See supra* section VII.D.1.c for a discussion of how the final rules may increase the cost of processing and storing consolidated market data.

¹⁷⁰⁶ The final amendments to Rule 605 likewise included an amended definition of “categorized by order size” that requires orders to be categorized according to whether they are round lots. *See* Rule 605 Proposal, *supra* note 117, at 3807; proposed Rule 600(b)(19). As amended, rather than requiring the reporting of order sizes in terms of whether an order was less than one share, an odd-lot, or in one of five categories based on numbers of round lots, final Rule 605 requires the reporting of order sizes in terms of notional values, with each order size category further separated into whether an order is a round lot, odd-lot, or fractional order, for a total of 24 reporting categories. *See* Rule 605 Amendments, *supra* note 10, at section III.B.1; adopted Rule 600(b)(18). Prior Rule 600(b)(13) required reporting of order sizes in one of four categories based on numbers of round lots, with no reporting of fractional orders or odd-lots.

¹⁷⁰⁷ *See* Tastytrade Letter at 5.

¹⁷⁰⁸ *See* Rule 605 Amendments, *supra* note 10, at 26428 n.375. It may be the case that, within a given notional order size bucket in Rule 605 reports, the distribution of orders across round-lot and odd-lot categories may change for some stocks following the implementation of the new round lot definition.

¹⁷⁰⁹ *See supra* section VII.C.5 for discussion of the implementation timeline for the adopted amendments to Rule 605. *See supra* section VI for further discussion of the compliance dates for the final rules.

¹⁶⁹⁴ *See* MDI Adopting Release, *supra* note 10, at 18753 and 18793–95 (discussing market participants substituting MDI odd-lot information for exchange proprietary data feeds).

¹⁶⁹⁵ As another example, the Rule 605 Amendments stated that one indirect effect of the amendments to Rule 605 might be an increase in incentives for reporting entities to compete in areas other than improved execution quality, including lowering their access fees. *See* Rule 605 Amendments, *supra* note 10, at 26575. This could also reduce incentives to route based on fees and rebates, which would reduce the benefits of increased transparency under the final rules. However, this would only be the case in limited circumstances, *i.e.*, when exchanges are not able to differentiate themselves based on execution quality. Furthermore, the Rule 605 Amendments also acknowledged that Rule 605 reporting entities may pass some of the costs of amended Rule 605 on to their customers. *See* Rule 605 Amendments, *supra* note 10, at 26586. If exchanges pass on their compliance costs by raising their access fees, then the benefits of the final rules may be heightened by the adopted amendments to Rule 605, rather than lessened.

¹⁶⁹⁶ *See supra* section VII.D.4.c.

¹⁶⁹⁷ *See* 17 CFR 242.600(b)(14) (defining the “best available displayed price”) and 17 CFR 242.605(a)(1)(ii)(M) through (Q); *see also* Rule 605 Amendments, *supra* note 10, section III.B.4(g) for further discussion of these amendments.

¹⁶⁹⁸ *See supra* note 1176 and corresponding text.

¹⁶⁹⁹ *See supra* section VII.D.1.b for further discussion.

¹⁷⁰⁰ *See supra* note 1179 and corresponding text.

¹⁷⁰¹ An analysis of CAT data in the Rule 605 Amendments found that, in the quartile of stocks with the lowest quoted spreads (an average quoted spread of around \$0.026), midpoint-or-better orders still compromise a non-negligible percent of order flow, representing 5.15% of submitted orders (4.32% of submitted shares). This is compared to the quartile with the highest quoted spreads (an average quoted spread of \$20.26), where midpoint-or-better orders are 9.66% of submitted orders (8.62% of submitted shares). *See* Rule 605 Amendments, *supra* note 10, at 26428 n.1448.

¹⁷⁰² *See supra* note 1182 and corresponding text.

¹⁷⁰³ *See supra* section VII.D.4.d.

¹⁷⁰⁴ *See supra* note 1178.

¹⁷⁰⁵ The amendments to include in Rule 605 information about price improvement relative to the best displayed price, size improvement, and beyond-the-midpoint NMLOs (which are a subset of midpoint-or-better NMLOs) were also considered in the Rule 605 Proposal; *see* Rule 605 Proposal, *supra* note 117, at 3817, 3819, and 3810. The Commission acknowledges that, to the extent that it occurs, an increase in the cost of processing and storing consolidated market data may be higher for larger broker-dealers, who will be required to prepare Rule 605 reports for the first time under the adopted amendments to Rule 605. As a result, the additional

used to assess whether the final rules are necessary.¹⁷¹⁰

Although the information disclosed under Rule 605 is a significant source of information about execution quality, the Commission did not rely on, and does not believe that it is necessary to rely on, Rule 605 data (either adopting or pre-existing) in its analyses in the Proposing Release or in the adoption of the final rules.¹⁷¹¹ Instead, the Commission utilized other data sources for conducting the relevant analyses, including with respect to execution quality, which it believes has sufficiently informed the Commission and the public on the issues being addressed in the final rule.¹⁷¹² Other commenters suggested waiting until after the amended Rule 605 data is available so that amended Rule 605 data

could be used to evaluate the impact of the implementation of the final rules.¹⁷¹³ The Commission acknowledges that Rule 605 data is an important source of public information about order execution quality. However, as stated by another commenter, there are other data products that provide relevant information on execution quality that can be used to evaluate the impact of the final rules.¹⁷¹⁴ Waiting until amended Rule 605 data are available to adopt the final rules would delay the significant benefits of the final rules to be realized, and the Rule 605 Amendments cannot and do not solve the main concerns that the final rules address by reducing the tick size, lowering the access fee cap, and accelerating the round lot definition are designed to solve.

b. Implementation Costs From Overlapping Compliance Periods

Several commenters stated that the Commission should consider the cumulative costs of implementing the proposed amendments and other recent Commission rules and proposed rules.¹⁷¹⁵ Specifically, one commenter requested that the Commission “publish a thorough analysis of the cumulative effects of the Interconnected Rules that accounts for interconnections and dependencies among them and any other rules the Commission has proposed or intends to propose in the near term,” and “tak[e] into account not just the expected effects on investors and our capital markets but also practical realities such as implementation timelines as well as operational and compliance requirements.”¹⁷¹⁶ We consider here recently adopted rules, including the Settlement Cycle Adopting Release, February 2024 Form PF Adopting Release, May 2023 SEC Form PF Adopting Release, Dealer Adopting Release, Rule 605 Amendments, Beneficial Ownership Adopting Release,

Rule 10c–1a Adopting Release, Short Position Reporting Adopting Release, Treasury Clearing Adopting Release, and Customer Notification Adopting Release.¹⁷¹⁷

Consistent with its long-standing practice, the Commission’s economic analysis in each adopting release considers the incremental benefits and costs for the specific rule—that is the benefits and costs stemming from that rule compared to the baseline. The Commission acknowledges the possibility that complying with more than one rule may entail costs that could exceed the costs if the rules were to be complied with separately. Two of the rules identified by commenters have compliance dates that occur before the effective date of the final amendments.¹⁷¹⁸ The compliance periods for other rules overlap in part, but the compliance dates adopted by the Commission in recent rules are generally spread out over an approximately two-year period extending to June 2026,¹⁷¹⁹ which could limit the number of implementation activities occurring simultaneously. Where overlap in compliance periods exists, the Commission acknowledges that there may be additional costs on those entities subject to one or more other rules as well as implications of those costs, such as impacts on entities’ ability to invest in other aspects of their businesses.¹⁷²⁰

Affected entities subject to the amendments may be subject to one or more of the other recently adopted rules depending on whether those entities’ activities fall within the scope of the other rules. Specifically, the Rule 605 Amendments, which require disclosures for order executions in NMS stocks, affects market centers and certain larger broker-dealers that were not required to publish Rule 605 reports prior to the Rule 605 amendments. The Beneficial Ownership, Rule 10c–1a, Short Position Reporting, Dealer, and Customer Notification Adopting Releases also apply to certain brokers and dealers¹⁷²¹—although due to differing

¹⁷¹⁰ See, e.g., Virtu Letter II at 24 (recommending that “the Commission amend Rule 605 to provide more comprehensive execution quality statistics on retail activity based on input from investors and market participants, and then pause to study and assess market quality based on the newly collected data before determining whether to move forward with the Proposed Rule”); Citadel Letter II at 1–2 (stating that “the data provided pursuant to an updated Rule 605 should be the primary input in determining whether the other proposals are necessary”) See also Letter from Ellen Greene, Managing Director, Equities & Options Market Structure, and Joseph Corcoran, Managing Director, Associate General Counsel, SIFMA, dated Aug. 14, 2024 at 3; SIFMA Letter II at 3; Virtu Letter II at 1–2; and comments discussed in *supra* note 122 and accompanying text.

¹⁷¹¹ This was supported by a commenter, who stated that “better data from Rule 605 reports, among other sources, could be useful in making additional decisions about tick size in the future. But it is certainly not needed to decide whether to make changes to the tick size now.” See IEX Letter I at 4.

¹⁷¹² Data used in the Proposing Release, *supra* note 11, included CAT data, see, e.g., Proposing Release at 80340 n.673; MIDAS data, see, e.g., *id.* at 80297 Tables 1, 2; TAQ data, see, e.g., *id.* at 80313 Table 6; WRDS intraday indicators, see, e.g., *id.* at 80316 Table 8; Rule 606(a)(1) reports, see, e.g., *id.* at 80306 n.467; and Tick Size Pilot data and Rule 606(a)(1) reports, see, e.g., *id.* at 80320 Table 9. While the Proposing Release included an estimate of the number of trading venues who report Rule 605 statistics, see *id.* at 80333, Rule 605 data itself was not used. One commenter stated that the Proposing Release, “relies, in part, on data from Rule 605 reports—which use metrics that the Commission has acknowledged are deficient and in need of modification.” The commenter proceeded to cite the Proposing Release at 80321 n.557, which discusses the horizon over which realized spreads are calculated in both the TSP analysis and in Rule 605 reports. See Virtu Letter II at 5 and n.8. The realized spread is a common and useful metric that will continue to be reported under the amendments to Rule 605. While both the TSP analysis and Rule 605 reports calculate realized spreads using a five-minute horizon, the commenter is incorrect in stating that the Proposing Release relied on data from Rule 605 reports. In the TSP analysis, the Commission calculates realized spreads using trade and quote data from TAQ; when completing Rule 605 reports, trading centers calculate realized spreads using similar trade and quote data. Rule 605 reports are therefore not necessary to obtain the realized spreads used in the TSP analysis.

¹⁷¹³ See, e.g., SIFMA Letter II at 3 (stating that a quantitative analysis “can only be done effectively after the implementation and operation of the proposed amendments to Rule 605 to allow the Commission and the public to measure the impact of modified tick sizes and/or access fee caps”); see also Citadel Letter I at 29 (stating that “if both proposals were to be finalized, it appears that market participants and regulators would be unable to accurately assess the true impact of the market structure changes contained in this Proposal, precluding an ‘apples-to-apples’ before-and-after comparison”).

¹⁷¹⁴ See IEX Letter III at 3 (“There are myriad sources of information that both regulators and market participants draw on to consider how orders are handled and how markets compete with and compare to each other.”). See also *supra* section II for additional discussion.

¹⁷¹⁵ See *supra* note 1035.

¹⁷¹⁶ ICI Letter II.

¹⁷¹⁷ See *supra* section VII.C.

¹⁷¹⁸ The compliance date for the May 2023 SEC Form PF Adopting Release occurred on December 11, 2023 and June 11, 2024, and the compliance date for the Settlement Cycle Adopting Release occurred on May 28, 2024.

¹⁷¹⁹ See *supra* section VII.C.

¹⁷²⁰ See, e.g., MFA Comment Letter II (asserting that the adoption of multiple proposals would impose “unprecedented operational and other practical challenges”).

¹⁷²¹ See Beneficial Ownership Adopting Release, *supra* note 1029 at 76897, 76945; Rule 10c–1a Adopting Release, *supra*, note 1030 at 75647, 75717–18; Short Position Reporting Adopting Release, *supra* note 1031 at 75150; Dealer Adopting

requirements, these rules may not all apply to any given broker or dealer. The Treasury Clearing Adopting Release applies to certain participants of the covered clearing agencies which could include broker-dealers.¹⁷²² We acknowledge that entities subject to multiple rules may still experience increased costs associated with implementing multiple rules at once as well as implications of those costs, such as impacts on entities' ability to invest in other aspects of their businesses.

In addition, while the Commission received comments on the interaction of the MDI Rules and these amendments,¹⁷²³ commenters did not specifically address costs associated with overlapping compliance periods. When the Commission adopted the MDI Rules, it outlined a phased transition plan for implementation.¹⁷²⁴ Based on the times provided in the transition plan for implementation of the MDI Rules, the Commission estimated that the full implementation of the MDI Rules will be at least two years after the Commission's approval of the plan amendment(s) required by Rule 614(e).¹⁷²⁵ Therefore, the length of time affected market participants will have to come into compliance with both the MDI Rules and these amendments, and the likelihood of limited overlap in compliance periods, will mitigate compliance costs.¹⁷²⁶

One commenter stated that the complete implementation of the MDI Rules will undermine the Commission's economic analysis of amendments to Rules 610 and 612. The commenter stated: "Implementation of the MDI Rules would . . . likely mute any potential benefits of or weaken the case for the additional costs associated with the Tick Size Proposal . . . At minimum, the Commission is obligated to consider the fully implemented MDI Rules as part of the 'baseline' against which the asserted need for this new rule, and its impact, are assessed."¹⁷²⁷

The MDI Rules form part of the baseline for the amendments to Rules 610 and 612. The MDI Rules and these amendments will increase transparency, achieve better order execution, lower costs, and lead to better investment

decisions and increased market efficiency. However, the MDI Rules and these amendments—while sharing broad goals—achieve their benefits through distinct channels; therefore, implementation of the MDI Rules is unlikely to mute benefits arising from these amendments. The channel through which the MDI Rules achieves their benefits is data—the MDI Rules will increase the granularity of data that is included in NMS data and further introduce a decentralized competing consolidator model to lower the cost of purchasing this data. For market participants who already purchase proprietary data from exchanges, the MDI Rules may have a limited direct impact because these participants will not experience a change in their information set. Nonetheless, these participants will still see many benefits from the reduction in tick size and access fee cap. For example, they will be able to quote at more precise prices, which more accurately reflect the competitive cost of liquidity, and experience fewer instances of tick constraints. Also, any stocks that remain tick-constrained would have fewer distortions due to excess liquidity as a result of the reduction in the access fee cap. Therefore, the benefits of the MDI Rules do not lessen the benefits of the amendments to Rules 610 and 612 for these market participants.

For market participants who do not purchase proprietary data from exchanges, the MDI Rules, once fully implemented, as well as the market data amendments associated with this release, may complement the benefits of amendments to Rules 610 and 612. This is because the MDI Rules, including the amendments in this release, will result in more information being made available to non-consumers of proprietary data, while amendments to Rules 610 and 612 remove constraints on trading by alleviating tick constraints. The amendments in this release to Rules 610 and 612, the amendments to the MDI Rules, and the MDI Rules in total (once fully implemented), will create an environment where there is more, as well as better, information available to market participants that do not subscribe to proprietary data products. These market participants will also have an improved ability to trade on that information due to the lower expected cost of transacting for some stocks due to the lower tick size and access fee. The eventual inclusion of depth-of-book information in core data under the MDI Rules will also mitigate costs from the tick reduction causing liquidity to

spread across multiple price points¹⁷²⁸—market participants will more readily be able to see the liquidity available at these price points.

E. Effect on Efficiency, Competition, and Capital Formation

1. Efficiency

The amendments will improve price efficiency, namely the degree to which the price of a stock reflects its fundamental value. The improvement in price efficiency is expected largely to come through the reduction in the tick size and the reduction of the access fee cap. The acceleration of portions of the MDI Rules could also increase price efficiency, but those effects are largely to accelerate the economic impact already anticipated in the MDI Rules.

Lowering the tick size for some NMS stocks with prices equal to or greater than \$1.00, as well as lowering the access fee cap for all stocks to 10 cents for stocks with prices equal to or greater than \$1.00, or to 0.10% for stocks with prices lower than \$1.00, will increase price efficiency.¹⁷²⁹ The reduction in the tick size for some stocks along with the reduction of the access fee cap for all stocks will lower transaction costs.¹⁷³⁰ When trading becomes less costly, market participants have an increased incentive to gather more information because doing so is more profitable.¹⁷³¹ Gathering more information and trading on that information means that prices are more reflective of the fundamental value of the firm. Consequently, for stocks that receive an improvement in market quality due to the lower tick size or the reduction in the access fee, the Commission expects an improvement in price efficiency.¹⁷³²

The Commission further expects that quoted spreads will better reflect the cost of liquidity as a result of these amendments. As discussed in section

¹⁷²⁸ See section VII.D.1 for a discussion of this effect.

¹⁷²⁹ See NASAA Letter at 9, and Vanguard Letter at 6.

¹⁷³⁰ As discussed in section VII.B, the reduction in the fee cap will primarily lower trading costs and distortions for stocks that are tick-constrained; for stocks that are not tick-constrained, the reduction in the fee cap may lead to wider quoted spreads which will offset the lower fee. See *supra* note 1508 for a discussion of the fee cap's contribution to liquidity distortions for tick-constrained stocks; see also *supra* section VII.D.2.c on the effect of the fee cap reduction for stocks that are not tick-constrained.

¹⁷³¹ See, e.g., Dixon, *supra* note 1277 for a discussion of this concept in the context of short selling.

¹⁷³² *Id.*

Release, *supra* note 1028 at 14938, 14967–71; Customer Notification Adopting Release, *supra* note 1034 at 47689, 47725.

¹⁷²² See Treasury Clearing Adopting Release, *supra* note 1045, at 2717, 2791.

¹⁷²³ See, e.g., Citadel Letter I at 26; SIFMA Letter II at, e.g., 41–42; Robinhood Letter at 44.

¹⁷²⁴ See MDI Adopting Release, *supra* note 10, at 18699–18701.

¹⁷²⁵ See *supra* note 1139 and accompanying text.

¹⁷²⁶ See also section VII.D.4 (discussing the acceleration and implementation of the MDI Rules).

¹⁷²⁷ See Robinhood Letter at 44.

VII.B.3,¹⁷³³ high access fees and rebates can distort liquidity supply and demand.¹⁷³⁴ The tick acts as a price floor that prevents the spread from reflecting the true cost of liquidity; likewise, access fees—and the rebates they fund—further distort quoted spreads by taxing liquidity demand and subsidizing liquidity supply at this price floor. By reducing both the tick and the access fee cap, quoted spreads will better reflect the cost of liquidity and allow for more efficient liquidity provision.

Some commenters expressed the concern of diminished intra-tick pricing from reduced access fees.¹⁷³⁵ As shown in the Proposing Release, the NYSE, Nasdaq, and Cboe exchange families each operate both a maker-taker venue and an inverted venue.¹⁷³⁶ Variation in fee and rebate schedules across trading venues effectively allow for intra-tick pricing.¹⁷³⁷ However, that intra-tick pricing via access fees and rebates is an imperfect solution to the problem of a stock having a tick that is too large.¹⁷³⁸ Reducing the access fee cap can reduce the degree to which maker-taker trading centers can offer effective intra-tick pricing which could potentially lead to pricing distortions—*i.e.*, less efficient prices.¹⁷³⁹ However, the ability for markets to establish efficient prices will increase overall due to the reduced tick size for stocks with TWAQS less than or equal to \$0.015. The reduced tick size reduces the need for intra-tick pricing by providing a finer pricing grid on which market participants can submit orders. Specifically, a tick size of \$0.005

with an access fee and rebate of 10 mils provides an effective pricing grid with price pints at every \$0.005 and plus or minus \$0.001, which is finer than the current pricing grid with a tick size of \$0.01 and an access fee/rebate of \$0.003.¹⁷⁴⁰ For stocks not subject to the reduced tick size, the Commission acknowledges some reduction in the ability to price intra-tick. However, the efficiency loss is limited due to the fact that, by definition, these stocks have sufficiently wide average spreads, and thus sufficient ticks within the spread, to avoid qualifying for the lower tick size. For these stocks, there is less of a need to price intra-tick.

The reduction in the tick is expected to reduce the cost of transacting on exchanges, which will result in an increase in orders being sent to lit markets.¹⁷⁴¹ The reduction in the access fee cap is expected to widen quoted spreads, and the quote differential between lit exchanges and other trading venues may widen. This need not, however, lead to lower demand for lit liquidity, as the access fee, which currently disincentivizes investors to access liquidity on exchanges, will also be lower.¹⁷⁴² Thus, the net effect of the rules is an increase in orders on lit markets and an improvement in price efficiency.

Some commenters stated that a finer tick size could cause information leakage. Large orders may need to be divided into smaller orders due to the fragmentation of liquidity across multiple price levels; executing a large order may therefore reveal more information, which could increase price impact and trading costs.¹⁷⁴³ The

Commission acknowledges that information leakage may, in turn, reduce incentives to collect information ex-ante and thereby reduce price efficiency. However, on balance, the effect of the amendments to increase price efficiency by, on average, reducing trading costs. This is because the cost of information leakage primarily shows up in the form of wider spreads when a large trade is anticipated and higher costs of trading for large orders. If information leakage was a primary—rather than mitigating—effect of the smaller tick size, then in the TSP analysis discussed in section VIII.D.1.b.ii spreads would not have narrowed and round-trip trading costs would not have fallen for stocks with narrow spreads when the tick size was reduced. But this is not what that analysis found; thus, while increased information leakage could be a factor mitigating the reduction in spreads due to the smaller tick size, the net effect is expected to be lower trading costs for stocks receiving the smaller tick size. Additionally, the commenter's concerns are mitigated by the fact that the amendments do not include the proposed smaller tick sizes (0.001 and 0.002).

Lowering access fees also increases the efficiency with which the quote conveys information regarding the cost of liquidity. As discussed in section VII.D.2.d, access fees that fund rebates contribute to complexity and lack of transparency in markets because they separate both the true cost of demanding liquidity and the proceeds from supplying liquidity, as represented by the quoted half-spread. Reducing the wedge between the spread and the true cost also reduces conflicts of interest between broker-dealers and their customers. Multiple commenters stated that a lower access fee cap would help mitigate the conflict of interest because lowering the access fee is expected to reduce rebates available and thus the incentive to route based on rebates instead of execution quality.¹⁷⁴⁴

VII.D.1.e. The Commission acknowledges that tick-constrained stocks receiving a tick reduction may experience an increase in execution costs for sufficiently large orders—evidence from the TSP suggests that this occurs for orders that are quite large (approximately 50 round lots). See discussion surrounding note 1284.

¹⁷⁴⁴ See RBC Letter at 4 stating (“we believe that lowering the access fee cap would lead to a reduction in broker conflicts of interest . . .”); NASAA Letter at 9 (stating “reducing access fee caps could help reduce incentives for broker-dealers to route orders to trading venues that benefit those broker-dealers (such as venues in which a broker-dealer is rebated), but may provide suboptimal execution to the detriment of the broker-dealer's customers.”). See also Themis Letter at 7; *supra* section VII.D.3.

¹⁷³³ See also Proposing Release, note 11, at 80328: “If tick sizes were infinitely small, and absent other distortions, then fees and rebates would not affect the cost of trading because markets would simply adjust quotes by the amount of the rebate such that the spread with rebates included is the same. However, current U.S. equity markets differ from this frictionless construct because there is a finite tick. In this environment, and particularly for stocks with narrower spreads, high access fees and rebates can distort liquidity supply and demand by artificially increasing the cost of taking liquidity and the revenue to providing liquidity. This dynamic creates an environment with too much liquidity supply relative to liquidity demand.”

¹⁷³⁴ One commenter stated that the Commission did not explain these distortions, see *Virtu Letter II* at 16. The subsequent discussion (as well as the discussion surrounding note 1508, *supra*) explains the distortions.

¹⁷³⁵ See also Citadel Letter I at 16, CCMR Letter at 26.

¹⁷³⁶ See 87 FR 80313.

¹⁷³⁷ See also *supra* note 1128.

¹⁷³⁸ See *Quarter Penny Tick*, *supra* note 1127.

¹⁷³⁹ See *supra* note 1128 for an explanation of how variation in fee and rebate schedules across trading venues can increase price fidelity by allowing for more effective intra-tick pricing. Reducing the access fee cap reduces this effective intra-tick pricing by limiting the degree to which fee and rebate schedules can differ from one another.

¹⁷⁴⁰ Under the preexisting Rule 610 fees, maker-taker venues can offer liquidity demanders net prices that are 30 mils worse than quoted prices; inverted venues, in contrast, tend to offer net prices that are 30 mils better than quoted prices, creating a grid of price points that are 40 to 60 mils separated from each other. *E.g.*, the net prices available at a maker-taker venue may be \$10.003, \$10.013, etc., while the net prices available at an inverted venue may be \$9.997, \$10.007, etc.; the price points are 40 to 60 mils apart from each other. Under the reduced fee cap, maker-taker venues will only be able to offer liquidity demanders net prices that are 10 mils worse than quoted prices; to maintain a grid of price points that are 50 mils apart, an inverted venue could offer a net price that is 40 mils better than the quoted price by instituting a 40 mil rebate for liquidity takers. *E.g.*, the net prices available at a maker-taker venue will be \$10.001, \$10.013, etc.; with a 40 mil rebate, inverted venues could offer net price points of \$9.996, \$10.006, etc., so that the price points are 50 mils apart from each other. See also *Quarter Penny Tick*, *supra* note 1127, for a discussion of this concept.

¹⁷⁴¹ See *infra* section VII.E.2.a and VII.E.2.b for additional discussion. Specifically see discussion surrounding *infra* note 1752.

¹⁷⁴² See, *e.g.*, IEX Letter VI at 1–6.

¹⁷⁴³ See *supra* notes 1219, 1220 and 1398, as well as related discussion in sections VII.D.1.b.i and

Making fees and rebates determinable at the time of execution, along with the reduction of the access fee cap could also increase price efficiency by helping minimize potential conflicts of interest.¹⁷⁴⁵ Fees and rebates create a potential conflict for a broker in situations where incentives related to transaction fees, which are paid by the broker, potentially conflict with incentives to obtain execution quality, which may affect the customer.¹⁷⁴⁶ This conflict, if acted on, can lead to inefficient order routing and worse transaction outcomes for customers;¹⁷⁴⁷ it can also lead to an inefficient incorporation of information into stock prices, harming market efficiency. Making access fees determinable at the time of execution will enhance efficiency by providing market participants with certainty concerning the fees that they will be charged per transaction. This certainty could also allow broker-dealers to examine their own best-execution performance more efficiently. Greater certainty about fees and rebates in advance of routing an order could also increase the efficiency of the broker-dealers' best execution assessments by providing them with greater certainty about the full cost of a transaction when executing the order. Additionally, to the extent that determinable fees make it easier for broker-dealers to communicate fees and transmit them to end customers, doing so could help eliminate distortions that might occur due to potential conflicts of interest. However, to the extent that exchanges are not able to as effectively replicate some incentives that were based on using historical activity,¹⁷⁴⁸ requiring these fees to be determinable at time of execution may reduce efficiency.

Accelerating the addition of odd-lot information to NMS data and the inclusion of information relating to the best odd-lot quote will realize some of the price efficiency benefits articulated in the MDI Rules at an earlier date, providing improved price efficiency earlier than anticipated in the MDI Rules. Specifically, research suggests that adding information on the shares available at price levels inside the

NBBO may improve price efficiency.¹⁷⁴⁹ Currently only market participants who subscribe to proprietary data feeds can view the odd-lot information and thus adjust trading strategies and decisions based on that information. Expanding the SIP feeds to include odd-lot information will provide new information to those investors who subscribe to the SIP data but do not subscribe to proprietary data feeds.¹⁷⁵⁰

2. Competition

a. Modification of Rule 612

The amendments will promote competition both on price on a given venue and across venues. This will occur because the amendments will allow liquidity providers to compete at more price points on exchange. By limiting the affected stocks to those with low spreads, the amendments ameliorate possible effects of pennyng which may accompany a finer pricing grid.¹⁷⁵¹

In addition, the amendments will improve the efficiency of on-exchange trading, allowing exchanges to better compete with off-exchange market makers. Empirical evidence suggests that, on average, relaxing tick constraints leads to volume moving onto exchanges primarily by improving market quality on the exchanges.¹⁷⁵²

¹⁷⁴⁹ See Robert P. Bartlett et al., *The Market Inside the Market: Odd-Lot Quotes*, Rev. Fin. Stud. (Sep. 19, 2023), available at <https://doi.org/10.1093/rfs/hhad074>.

¹⁷⁵⁰ There is the possibility that competing consolidators may not choose to distribute odd-lot information (because the MDI Rules do not require them to do so), in which case the positive effects of including odd-lots in NMS data on price efficiency will be lost. This outcome is unlikely because the odd-lot information is valuable in terms of having information relevant to stock prices, see Bartlett et al., *id.*, and the alternative to odd-lot information from the competing consolidators would be to subscribe to all of the proprietary data feeds, which is expensive. Given that there will be significant demand for the odd-lot information, competing consolidators will therefore offer the data.

¹⁷⁵¹ See *supra* section VII.D.1.b for additional discussion of the effects of pennyng.

¹⁷⁵² See two industry studies attached to MEMX Letter at 43–63 and 64–70. These studies examine the relaxation of tick constraints following reverse splits and find that the reduction in on-exchange trading costs results in an increase in on-exchange trading volume. See also Panel A of table 2 in Bidisha Chakrabarty, et al., *Tick Size Pilot Program and Price Discovery in US Stock Markets*, 59 J. Fin. Mkt. 100658 (2022). This academic study uses the TSP and finds that an increase in tick constraints results in an increase in off-exchange trading volume. See also Amy Kwan et al., *Trading Rules, Competition for Order Flow and Market Fragmentation*, 115 J. Fin. Econ. 330 (2015). This academic study examines the change in the tick from \$0.01 to \$0.0001 for orders priced in the vicinity of \$1.00, and finds that more volume is executed on exchanges when the trade price dips below \$1.00 and is therefore subject to the smaller tick.

Research suggests that this occurs both because of the reduction in transaction costs resulting from a finer pricing grid, and also because a tick that is too wide creates long queues for limit order execution and increase the incentives to send orders off-exchange.¹⁷⁵³

The increase in message traffic expected from the reduction in the tick sizes for certain stocks will result in a mild increase in costs to process such traffic for those who receive the relevant data feeds.¹⁷⁵⁴ Because such technological costs are largely fixed, and do not depend on the size of the broker-dealer, this could disadvantage smaller broker-dealers in the market to provide broker-dealer services to investors.

Some commenters stated that variable tick sizes could increase confusion among investors trading on-exchange, thereby driving orders off-exchange.¹⁷⁵⁵ The potential for investor confusion is addressed generally in section VII.D.1.d. To the point about confusion due to a smaller tick size driving order flow off of exchanges, this is unlikely. The ability to trade at finer price points, and the reduced need to wait in the queue should contribute to on-exchange trading, not off-exchange trading. Indeed, relaxing of tick constraints has been associated empirically with volume moving on-, not off-exchange.¹⁷⁵⁶

One commenter asked the Commission to consider the competitive effects of Rule 612 on stocks that have similar quoted spreads but fall just on either side of the threshold, specifically similar ETPs that may have quoted spreads that are similar but fall on either side of the threshold and so receive different tick sizes.¹⁷⁵⁷ The commenter considers two issuers, Issuer A and Issuer B, and explains that a narrower tick sizes for Issuer A could attract more liquidity to Issuer A's stock and less liquidity to Issuer B's stock. Once Issuer A's stock attracts more liquidity, its spreads could potentially narrow further, perpetuating a cycle in which Issuer B's shares are unable to catchup to Issuer A. The Commission, however, does not expect significant competitive effects in this situation. While the evidence suggests that stocks with quoted spreads less than the threshold will, on average, benefit from the lower tick, those benefits attenuate as spreads widen.¹⁷⁵⁸ Thus, for stocks or ETPs with

¹⁷⁵³ *Id.*

¹⁷⁵⁴ See *supra* section VII.D.1.c.

¹⁷⁵⁵ See Themis Letter at 6 and Cboe Letter II at 7.

¹⁷⁵⁶ See *supra* note 1752.

¹⁷⁵⁷ See SIFMA Letter II at 41.

¹⁷⁵⁸ See *supra* section VII.D.1.

¹⁷⁴⁵ One commenter stated that they agreed with the Commission's analysis of these effects, see Council of Institutional Investors Letter at 5; see also Themis Letter at 7.

¹⁷⁴⁶ See Vanguard Letter at 6. See also *supra* section VII.D.2 for additional discussion of access fees.

¹⁷⁴⁷ See Retirement Coalition Letter at 2.

¹⁷⁴⁸ See *supra* section VII.D.3 for further discussion on basing fees and rebates on historical activity.

spreads right at the threshold, the differential effect of the smaller tick size may be relatively small.

b. Lower Access Fee Caps

The amendments to Rule 610(c) reducing the access fee cap will have varying effects on competition between trading venues as well as competition between broker-dealers. The Commission does acknowledge that it would limit the ability of exchanges to differentiate themselves from other exchanges on the basis of their pricing schedules; however, the Commission expects that exchanges will continue to set fees and rebates at or near the access fee cap. A lower access fee cap mechanically reduces the range over which pricing tiers can vary, potentially reducing the economic differences between pricing tiers thereby reducing the benefits from routing order flow for the purpose of qualifying for one tier over another. This can reduce the competitive wedge between high and lower volume broker-dealers due to volume discounts making it easier for lower volume broker-dealers to compete with larger volume broker-dealers.

Commenters disagreed regarding the effects of the 10 mils cap relative to the 15 mils/30 mils alternative in terms of the competitive dynamics between on- and off-exchange venues, with some commenters arguing that reducing the access fee cap would cause a shift to on-exchange trading while others arguing it would cause a shift to off-exchange trading.¹⁷⁵⁹ The Commission's discussion in section VII.D.2.c suggests that it is unlikely that significant activity will be driven off-exchange, and it is possible that activity may come on-exchange as a result of the lower access fee cap. Moreover, the lower access fee cap will improve competition relative to the 15 mils/30 mils alternative in that it will reduce information asymmetries among investors, better aligning displayed prices with the actual costs of transactions.¹⁷⁶⁰

Some commenters expressed that the reduction in access fees will impede exchange competition by reducing their ability to offer differentiated pricing.¹⁷⁶¹ One commenter stated that this will

particularly disadvantage new exchanges with limited opportunities for differentiation.¹⁷⁶² Another commenter stated that the inability to differentiate based on fees and rebates will lead volume to congregate on the listing exchange to the detriment of non-listing exchanges.¹⁷⁶³

The Commission acknowledges that lowering the access fee cap will mechanically limit the extent to which exchanges can potentially differentiate themselves based on varying pricing schedules and diminish their ability to compete on the basis of their pricing schedules. However it is not clear if the amount of differentiation or degree of competition will diminish because exchanges do not appear, in the markets today, to be competing on the basis of offering substantially different pricing schedules or models.¹⁷⁶⁴ The vast majority (>85%) of on-exchange trading volume executes on exchanges with maker-taker pricing models and with baseline access fees near the cap and rebates slightly lower than the access fee cap.¹⁷⁶⁵ The few exchanges which deviate from this pricing style do not execute a large proportion of trading volume.¹⁷⁶⁶ Additionally, smaller or newer exchanges (which do not belong to one of the three large exchange families) have adopted similar pricing schedules and thus do not seem to be competing for order flow by differentiating their pricing schedule. For example, MEMX, the exchange with the most market share not affiliated with one of the three large exchange families, adopted a similar maker-taker pricing schedule to what is prevalent in the market. Additionally, IEX, a formerly flat-fee exchange, has recently switched to a maker-taker pricing model, citing the need to incentivize liquidity provision.¹⁷⁶⁷ This is in line with the

discussion in section VII.C.2, which explains how the structure of markets today incentivize the adoption of maker-taker pricing where access fees are set at or near the access fee cap in order to fund large maker rebates as a means of attracting competitively priced quotes, which in turn increase the trading volume executed on the exchange. Lowering the access fee cap does not change this dynamic, and so the Commission expects that exchanges will continue to set fees and rebates at or near the lowered access fee cap.

When stating that a lower access fee cap would limit competition by restricting differentiation, one commenter pointed out that when one exchange switched from a flat rebate model to a tiered pricing model that exchange quoted at the NBBO more often.¹⁷⁶⁸ This is consistent with a tiered pricing structure discouraging order routing to competing venues. In this case switching to a tiered pricing schedule incentivized that exchange's members to not route orders to competing exchanges to collect the benefits associated with high volume tiers. More orders sent to the exchange incentivizes more aggressive quoting on the exchange leading the exchange to quote at the NBBO more often. However, the effect on tiering from the amendment's reduction in the access fee cap would be different from this example because the reduction in the access fee cap would apply to all exchanges, meaning that the effect on competition from tiering will also be diminished across all exchanges. Therefore, the effect that a lower access fee cap would have on one exchange's ability to more consistently quote at the NBBO is likely to be weaker than that stated by the commenter.

One commenter expressed the concern that the reduced access fee cap may also result in exchanges increasing the cost to access market data or sell preferential access to exchange data to some members but not to others.¹⁷⁶⁹ The adopted amendments address this concern as compared to the proposal by eliminating the proposed requirement for an access fee cap of 5 mils on some stocks. One commenter stated that while it is possible that a sufficiently low cap could generate this concern, the access fee cap of 10 mils strikes the right balance.¹⁷⁷⁰ Furthermore, as explained in section VII.D.2.b, the Commission does not expect exchange transaction

¹⁷⁵⁹ See Virtu Letter II at 19.

¹⁷⁶³ See Choe Letter II at 7.

¹⁷⁶⁴ As explained in section VII.C.2, exchanges can differentiate themselves by offering different fee schedules—e.g., inverted, flat fee, or maker-taker with numerous price strata. Reducing the access fee cap can reduce the variation in rebates and fees across venues by narrowing the viable range for fees and rebates thereby making the different exchange price schedules more similar. However, many price schedules are already quite similar despite the 30 mil access fee cap allowing for a greater degree of differentiation. For instance, the data reported in table 4 does not show that there is currently a large degree of variation in the highest fees charged, particularly among maker-taker exchanges which dominate the market. Additionally inverted exchange fees are all set close to the access fee cap.

¹⁷⁶⁵ See table 5.

¹⁷⁶⁶ *Id.*

¹⁷⁶⁷ *Self-Regulatory Organizations; Investors Exchange LLC; Notice of Filing and Immediate Effectiveness of Proposed rule Change Pursuant to IEX Rule 15.110 to Amend IEX's Fee Schedule,*

Securities Exchange Act Release No. 98063 (Aug. 4, 2023), 88 FR 54373 (Aug. 10, 2023).

¹⁷⁶⁸ See Choe Letter III at 8.

¹⁷⁶⁹ See RBC Letter at 4.

¹⁷⁷⁰ See Verret Letter I at 8.

¹⁷⁵⁹ We focus on the competitive effect of the access fee cap relative to the alternative, as failure to reduce the access fee cap in the presence of the tick constraint would lead to a loss of price coherence. For commenters stating that reducing the access fee cap would increase off-exchange volume, see, e.g., Nasdaq Letter II at 4 and Choe Letter IV at 2–3. For commenters stating that reducing the access fee cap would increase on-exchange volume, see IEX Letter VI at 7.

¹⁷⁶⁰ See IEX Letter VI at 4–6.

¹⁷⁶¹ See Fidelity Letter at 14, Virtu Letter II at 10, Choe Letter II at 8, and Citadel Letter I at 24.

revenues on transactions priced greater than \$1.00 to substantially change as a 10 mil access fee cap is expected to be high enough that exchanges can continue to realize their current net capture rates for these transactions.

Reducing the access fee cap may also impact competition between broker-dealers who are exchange members, to the extent that a lower access fee cap diminishes the marginal benefit of qualifying for a pricing tier with lower fees or higher rebates over another tier with less preferential terms. Different transaction pricing tiers, particularly volume-based pricing tiers providing more favorable fees and/or rebates to exchange members who execute higher relative order volume, introduce a competitive wedge between those exchange members who qualify for the better tiers and those who do not. Another commenter stated that high access fees disproportionately affect smaller firms and investors, and lowering the access fee cap would promote a more competitive and diverse market landscape.¹⁷⁷¹ The commenter stated that exchanges employ pricing tiers to extract rents from smaller exchange members which are then split between the exchange and their high tier members, and lowering the access fee cap would limit the extent to which this can occur.¹⁷⁷² Under the assumption that a reduction in access fees would be accompanied by a reduction in transaction rebates, one possible effect of reducing the access fee cap would be to diminish the relative differences in the fees charged and rebates offered between different pricing tiers.¹⁷⁷³ As shown in table 4 multiple exchanges have fee or rebate tiers which vary within a range that is greater than 10 mils. Therefore, lowering the access fee cap to 10 mils will necessitate that pricing tiers would have to be placed within a narrower price range. The Commission expects that as the differences between pricing tiers become less economically meaningful, the competitive wedge introduced by pricing tiers will diminish, which would make it easier for exchange members lacking scale to compete with exchange members that qualify for preferential pricing tiers (*i.e.*, tiers with higher rebates/lower fees).

Another commenter stated that although the access fee cap would be lowered, it could still allow sufficient

room for existing differences in preferential pricing to persist.¹⁷⁷⁴ The commenter used the example of a large bank and small broker both paying a 30 mils rebate with the bank receiving a 32 mils rebate and the broker receiving 24 mils. Under a 10 mils access fee cap, the exchange could offer a 12 mils rebate to the bank and 4 mils to the broker. In that case the differential between the bank and the broker would remain the same despite the reduced access fee cap. In the example provided by the commenter, the exchanges could continue to offer a fully funded rebate to some exchange members, which is 8 mils greater than offered to other exchange members, because that 8 mil differential would be allowed under a 10 mil access fee cap. The Commission acknowledges that exchanges would be able to continue to offer differentiated pricing; however, a lower access fee cap would reduce the extent to which pricing tiers can differ and limit the aggregate fees available to the exchange to redistribute among its members in the form of rebates. It is more difficult for an exchange to fund high rebates, particularly those greater than the fee cap, under a lower access fee cap.

c. Acceleration of the MDI Rules, Addition of Information About Best Odd-Lot Orders, Fees and Rebates Determinable at Time of Execution

Accelerating the inclusion of odd-lot information in the NMS data, along with the implementation of the MDI Rules round lot definition, might lead to increased competition between exchanges and ATSS and OTC market makers, including wholesalers. NMS stocks priced greater than \$250.00 are expected to benefit sooner from a tighter NBBO, thereby increasing the competitiveness of the best displayed protected quotes. Greater visibility of more competitively priced odd-lot orders inside the NBBO could increase the competitive position of exchanges and ATSS and attract greater order flow. This effect will be temporary, only lasting until the full implementation of the MDI Rules. After the full implementation of the MDI Rules, the effect on competition is accounted for in the MDI Adopting Release and is not ascribed to these amendments.

Making exchange fees and rebates determinable at the time of execution will enable the customers of broker-dealers to better discuss transaction fees and rebates with their broker-dealers, and potentially request data on the

exchange fees incurred by an order,¹⁷⁷⁵ which will increase competition between broker-dealers along this dimension, leading to better order execution and lower costs.¹⁷⁷⁶ In particular, while there is currently no requirement to either pass on the fees and rebates to customers, or account for fees and rebates when assessing execution quality, there may be competitive pressure to do so as a result of the amendments because a competing broker-dealer will be able to include fees and rebates in its transaction cost analysis, or simply pass them through to the customer. One commenter stated that the requirements for exchange pricing under this rule change will be “even more anti-competitive” than the current practice, because this would mean that “smaller brokers can’t attract new flows based on modelling of what such flows will do to their rates upon arrival.”¹⁷⁷⁷ The Commission disagrees with the statement that this rule change will make the market for offering executing broker services more anti-competitive. As described in section VII.D.3, this rule change allows brokers to determine their fees and rebates at execution and thereby eliminates the need for forecasting future market outcomes in order to anticipate the fee that will be incurred by an order. To the extent such forecasting is more difficult for small brokers, the rule change will make it easier for small brokers to compete.

Including odd-lot information in the exclusive SIPs and providing the best odd-lot order information will enhance competition among broker-dealers. Making the best odd-lot order information accessible through the exclusive SIPs will facilitate better analysis of a broker-dealer’s execution quality than is available with just NBBO data.¹⁷⁷⁸ Thus, it could be easier for

¹⁷⁷⁵ For example, some brokers allow customers to direct an order to a particular exchange. By making the fees and rebates determinable at execution, the broker may be better able to inform the customer of the net transaction price of a prospective directed order.

¹⁷⁷⁶ Under the baseline it would be difficult in many cases for a broker-dealer to allocate specific rebates received or fees paid to one customer’s trade because the fees or rebates in a given month are based, in many instances, on that broker-dealer’s total trading volume across all customer accounts, *see* section VII.C.2.b. However, if the fees and rebates are determinable at the time of execution the broker-dealer could feasibly track a specific fee or rebate to a specific trade, making it possible for a customer to receive such information.

¹⁷⁷⁷ *See* Danny Mulson Letter.

¹⁷⁷⁸ *See supra* note 1621, for a discussion on the incentives that institutional traders have to monitor all aspects of transaction costs.

¹⁷⁷¹ *See* Verret Letter I at 9.

¹⁷⁷² *Id.* at 6, 7.

¹⁷⁷³ According to table 4 the differences in pricing tiers for many exchanges exceed 10 mils therefore if the number of pricing tiers does not decrease, by necessity, the average difference between the tiers would diminish.

¹⁷⁷⁴ *See* Healthy Markets Letter I at 23–24.

some customers to monitor the performance of their broker-dealers.¹⁷⁷⁹

Accelerating the inclusion of odd-lot data into the exclusive SIPs will increase competition among data providers of odd-lot information prior to the full implementation of the MDI Rules, though it will do so less than envisioned in the MDI release for the period until the MDI Rules are fully implemented. Specifically, under the implementation schedule in the MDI Rules, adding odd-lot information to core data was to occur during the parallel operation period. Adding odd-lot information to the current exclusive SIPs will enable the exclusive SIPs to compete directly with the exchanges' proprietary data products for use in visual display settings. Without this change, the only means to get odd-lot information is to subscribe to multiple proprietary data feeds. This will change when odd-lots are a part of SIP data.

Unlike the data provided by the competing consolidators, the current exclusive SIPs are not fast enough for use in certain trading.¹⁷⁸⁰ Thus, the competition for odd-lot data will be limited to odd-lot information used in visual display settings. To the extent that some market participants subscribe to proprietary data for use in visual display settings, the introduction of odd-lot information to the exclusive SIPs will provide competition to this segment of the market and reduce the prices of odd-lot information provided by the proprietary data feeds. However, the Commission does not believe that this market is very large. Currently, for most display settings, market participants use SIP data or one of the top-of-book data products offered by one of the three highest volume exchange groups; it is unclear to what extent market participants subscribe to proprietary data with odd-lot information for use in visual display settings.

With respect to competition for top-of-book (TOB) data, the exclusive SIPs face competition from exchanges' TOB data products. As discussed in the MDI adoption,¹⁷⁸¹ these proprietary products are typically less expensive and contain

less content—being derived from a single exchange or exchange family—than the exclusive SIPs. If the exclusive SIPs charge more for data on account of the increased costs associated with disseminating odd-lot information, then this may provide a competitive advantage to providers of proprietary TOB products.

Requiring the exclusive SIPs to disseminate the accelerated odd-lot information until the exclusive SIPs are retired will guarantee that the odd-lot information will be disseminated.¹⁷⁸² However, this requirement may also affect competition among competing consolidators once the MDI Rule is fully implemented. On the one hand, these new requirements on the SIPs could reduce competition among competing consolidators and therefore reduce the expected benefits of the MDI Rules. This reduction in competition could occur because the amendments may increase the competitive advantage of exclusive SIPs relative to non-SIP competing consolidators because the SIPs will have established a market for odd-lot information before having to face competition. That is, the SIPs will have time to acquire customers for odd-lot information before other competing consolidators can enter. These customers may then face costs should they switch to a non-SIP competing consolidator; these switching costs may dissuade entry by non-SIP competing consolidators and thereby lower competition.¹⁷⁸³

On the other hand, the Commission is uncertain whether the SIPs will become competing consolidators.¹⁷⁸⁴ The amendments' requirement for SIPs to disseminate odd-lot information reduces the incremental costs that the SIPs would need to bear in order to become competing consolidators. Therefore, these amendments make it more likely that the SIPs will register as competing consolidators, which would improve competition relative to a scenario in which they do not compete.

Further, non-SIP competing consolidators will still have an opportunity to compete for significant market share. As discussed above, SIPs

face latency disadvantages relative to exchanges.¹⁷⁸⁵ If competing consolidators can offer a lower latency product, then they can capture a part of the market that the amendments will not affect—those customers who will use odd-lot information in ways other than visual display.¹⁷⁸⁶ Likewise, competing consolidators can offer depth-of-book data under the MDI Rules, which the SIPs are not required to disseminate under these amendments. If these markets are significantly bigger than the odd-lot visual display market, the competitive advantage of the exclusive SIPs will be less likely to dissuade entry, and non-SIP competing consolidators could have sufficient incentive to enter the market.¹⁷⁸⁷

3. Capital Formation

The Commission expects that the amendments will promote capital formation. First, the combined effect of the amendments will be to increase liquidity generally, which will increase incentives to trade and therefore price efficiency. Price efficiency in turn promotes capital formation. The Commission also expects that the alleviation of tick constraints and the lower access fee cap will work together and separately to lead to displayed prices that are more reflective of supply and demand for the underlying securities, also promoting capital formation.

One commenter stated that a narrower tick could increase volatility and decrease liquidity which could discourage companies from going public.¹⁷⁸⁸ As discussed in section VII.D.1, stocks receiving the \$0.005 tick on average will not experience harmful liquidity effects. On the contrary, as discussed in section VII.D.1, the expectation is that on average liquidity will improve for stocks with narrow quoted spreads that receive the tick size reduction. Additionally, as discussed in section VII.D.1, the narrower tick will not result in increased volatility.¹⁷⁸⁹ Consequently, even if there was a link between liquidity and volatility, and the decision to go public, those channels

¹⁷⁷⁹ It is possible that some institutional traders have access to proprietary data feeds that provide the ability to benchmark trades against odd-lot orders. Or, they could contract with specialized firms that have access to the data and provide transaction cost analysis.

¹⁷⁸⁰ See MDI Rules for a discussion of the SIPs' higher latency relative the proprietary feeds offered by exchanges. In particular, footnote 26 on page 18599 summarizes commenters' views on the disadvantages of using SIP data instead of proprietary feeds.

¹⁷⁸¹ See MDI Adopting Release, *supra* note 10 at 18603.

¹⁷⁸² See *supra* section VII.D.4.c for additional discussion. While the amendments require the exclusive SIPs to distribute odd-lot data, the MDI Rules do not require the competing consolidators to disseminate odd-lot data. However, the MDI Adopting Release anticipated that at least one competing consolidator will do so because there would be demand for the data.

¹⁷⁸³ See MDI Adopting Release, *supra* note 10, for further discussion of how competing consolidators have higher barriers to entry than exclusive SIPs, such as in the form of compliance costs associated with Regulation SCL.

¹⁷⁸⁴ See *supra* note 1782.

¹⁷⁸⁵ See *supra* note 1780.

¹⁷⁸⁶ See discussion around note 1780, *supra* explaining that the SIPs' latency disadvantage makes their data useful for visual display.

¹⁷⁸⁷ In the MDI Adopting Release, the Commission anticipated that both exchanges operating exclusive SIPs would have strong incentives to enter the competing consolidator market. See MDI Adopting Release, *supra* note 10, at 18761.

¹⁷⁸⁸ See RBC Letter at 3.

¹⁷⁸⁹ See *supra* notes 1209 and 1210 and surrounding text for a discussion of tick sizes and volatility.

aren't expected to be affected in the manner mentioned by the commenter. Further, the link between tick sizes and IPOs is not clearly defined in existing research.¹⁷⁹⁰

Commenters expressed the concern that wider spreads and reduced depth would negatively impact capital formation for growth companies.¹⁷⁹¹ Commenters specifically mentioned the importance of rebates for small and medium-sized growth companies, without which “market makers may no longer find it profitable to make tight markets.”¹⁷⁹² Two considerations enter in determining the effect of capital formation. First, for illiquid stocks, spreads are the primary determinant of revenue for liquidity providers. The rebate makes less of a difference on a percentage basis than for stocks that are more liquid. Second, the Commission does not expect the cost of transacting in illiquid securities to rise, net of fees and rebates.¹⁷⁹³ While the Commission acknowledges the crucial role of the ability of investors to transact for capital formation, it is not quoted spreads that matter to investors but rather the net spread available on exchange. In sum, liquidity is expected to improve for stocks with narrow quoted spreads that receive the tick size reduction—as discussed in section VII.D.1—and liquidity is not expected to be harmed for stocks that do not receive the tick

size reduction—as discussed in section VII.D.2. Therefore, the amendments are expected to improve liquidity and thus will not impede capital formation through this channel.

F. Reasonable Alternatives

This section considers alternatives to the amendments. In the Proposing Release, we considered the benefits and costs of multiple categories of alternative, and variations within those categories.¹⁷⁹⁴ For brevity we do not repeat that discussion here. Instead, this section focuses on additional alternatives suggested by commenters, to the extent they are not incorporated into the adopted amendments. We organize subsections around key elements of the Rule: tick size, minimum trading increment, access fee, and MDI and BOLO.¹⁷⁹⁵

1. Tick Size Alternatives

a. Alternative Criteria for Selecting Stocks Receiving a Smaller Tick Size

Commenters suggested alternative methodologies for identifying which stocks should receive a smaller tick size.¹⁷⁹⁶ These alternative methodologies are discussed in greater detail in section VII.D.1.b.iii and generally center on adding additional criteria, in addition to the TWAQS, to determine which stocks should qualify for a lower tick size.¹⁷⁹⁷ In that section, analysis failed to find evidence that the additional criteria would avert harm to market quality. One reason for this is likely that much of the information contained in these additional thresholds suggested by commenters is already contained in the TWAQS.¹⁷⁹⁸

Moreover, implementing these alternatives would increase the complexity of the amendments from the perspective of the listing exchanges, who would be required to track and implement multiple thresholds to identify tick-constrained securities. Increased complexity would increase the compliance costs of the amendments for these entities. Complexity would also increase for broker-dealers and investors, who would be required to take these changes into account. These alternatives would likely not affect the

compliance costs of the rules for other market participants relative to the adopted amendments. This is because these alternatives would not change how these entities learn which stocks are subject to the \$0.005 tick and which are subject to the \$0.01 tick size in terms of assessing lists from the listing exchanges' websites, and the need to update systems to implement the different tick sizes.

The biggest effect of these alternatives relative to the adopted amendments is that they would reduce the number of securities receiving a reduced tick size. For example, one proposed alternative would limit the number of securities receiving a smaller tick size to an estimated 58 stocks.¹⁷⁹⁹ Commenters stated that limiting the sample via additional thresholds and criteria would ensure that only the stocks that are absolutely the most likely to benefit from a smaller tick size would receive the smaller tick size.¹⁸⁰⁰ However, the drawback to this more limited approach is that the analysis presented in sections VII.D.1.b.ii and VII.D.1.b.iii suggests that many stocks that would not qualify for the lower tick size under these alternative thresholds would likely still benefit from reducing the tick size. This conclusion is supported by the findings in table 9 which demonstrate that across many dimensions TSP stocks with narrow spreads that are nonetheless in the bottom quartile based on depth, price, or trading volume, *i.e.*, those that commenters suggest could perhaps be excluded from receiving the lower tick size, still experienced market quality improvements across many dimensions with a smaller tick. This analysis also fails to find statistically significant evidence that such stocks would be harmed. Consequently, adding additional criteria would add complexity to the implementation of the Rule, increasing the compliance costs of the rule, and would have lower benefits than the adopted amendments because it would leave some stocks with a wider tick size than would be optimal.

b. Alternative Threshold for Lower Tick Size

Some commenters suggested that the Commission adopt a threshold for the lower tick size that is different from the adopted amendments. The most common alternative suggested was a TWAQS of \$0.011 threshold.¹⁸⁰¹

¹⁷⁹⁰ Research on this topic is exceptionally difficult. As stated in the report *Assessment of the Plan to Implement a Tick Size Program*, “There are myriad factors influencing companies' decisions about whether to go public or remain private—and, if an IPO is desired, in which country to list shares. These include the availability of capital outside the public equity market, the regulatory burdens placed on public companies, market conditions, broader macroeconomic trends and differences in economic conditions between countries globally. Additionally, broader historical context may reveal certain periods of strong IPO issuance, particularly during times of high speculative activity in markets, as anomalous and unsustainable.” See Securities and Exchange Commission, *Assessment of the Plan to Implement a Tick Size Pilot Program* (Jul. 3, 2018), available at <https://www.sec.gov/files/TICK%20PILOT%20ASSESSMENT%20FINAL%20Aug%202022.pdf> (last accessed Feb. 6, 2024).

¹⁷⁹¹ See Nasdaq Letter I at 24.

¹⁷⁹² See Nasdaq Letter I at 25. See also Virtu Letter II at 10.

¹⁷⁹³ One commenter, stating that the reduced access fee cap would reduce “incentives for liquidity in thinly traded securities,” cited a study showing that an improvement in liquidity from stock splits resulted in significant reductions in the cost of capital for firms that did a stock split (Virtu Letter II at 8, citing Ji-Chai Lin, Ajai K. Singh & Wen Yu, *Stock Splits, Trading Continuity, and the Cost of Equity Capital*, 93 J. Fin. Econ. 474, 475 (Jan. 1, 2009)). As stated above, because the reduction of the access fee will not result in an increase in the cost of liquidity, see *supra* section VII.D.2.c, discussing this point, there is no reason to expect the cost of capital to increase as a result of lowering the access fee cap.

¹⁷⁹⁴ See Proposing Release, *supra* note 11, at 80339.

¹⁷⁹⁵ Some commenters discussed “no action” as an alternative to the proposed rules. See, e.g., Virtu Letter II at 22–23. For purposes of the economic analysis, the baseline describes the world as it would exist without the rules.

¹⁷⁹⁶ See *supra* section VII.D.1.b.iii for additional discussion of these methodologies.

¹⁷⁹⁷ See *supra* note 1311 for discussion of specific commenter suggestions.

¹⁷⁹⁸ See *supra* note 1318 and surrounding discussion.

¹⁷⁹⁹ See Cboe Letter II at 5.

¹⁸⁰⁰ See *supra* section VII.D.1.b.iii for additional discussion.

¹⁸⁰¹ See, e.g., UBS Letter at 10 and JPMorgan Letter at 4. With a \$0.011 threshold, following the methodology employed in table 7, an estimated

The Commission estimates that the costs to implement this alternative would be similar to the adopted amendments because all affected entities would be required to perform the same work as in the adopted amendments. From an implementation perspective, the key difference between this alternative and the adopted amendments would be the considerably reduced number of stocks that would qualify for the alternative's lower tick size.

This alternative would more specifically target trading volume that is nearly always trading at the minimum trading increment. This alternative would leave stocks with quoted spreads between \$0.011 and \$0.015 with the \$0.01 tick size, whereas the adopted amendments assign a tick size of \$0.005 to such stocks. Using the same methodology as is used in table 7 there would be an estimated 1,216 stocks receiving a \$0.005 tick size under this alternative, a reduction of approximately 572 stocks compared to the adopted amendments. These omitted stocks have between 1.1 and 1.5 ticks intra-spread on average. Research and Commission analysis as well as commenters' analyses suggest that 2 to 4 ticks intra-spread is likely an optimal range for stocks.¹⁸⁰² Thus, assigning stocks with a quoted spread between \$0.011 and \$0.015 to a tick size of \$0.01—resulting in 1.1–1.5 ticks intra-spread—is likely to produce worse market quality outcomes than assigning these stocks a \$0.005 tick—which would result in 2.2–3 ticks intra-spread. Thus, under this alternative these stocks, on average, would be expected to have lower overall market quality relative to the adopted amendments. Specifically, analysis in table 8 of stocks in bin 2, which had 1–2 ticks intra-spread during the TSP, experienced significant improvements in market quality when the TSP tick size was relaxed—providing evidence that such stocks would benefit from a lower tick size. Consequently, this alternative, by failing to reduce the tick size for stocks that evidence suggests would benefit from a tick size decrease, would have lower benefits compared to the adopted amendments, while having similar costs.

1,216 stocks would receive the lower tick size, with a \$0.02 threshold an estimated 2,339 stocks would receive the lower tick size.

¹⁸⁰² See *supra* section VII.D.1.b.ii.

c. Alternative Measurement Horizons for TWAQS and Effective Periods for Tick Sizes

Some commenters suggested alternative measurement horizons to determine the TWAQS as well as alternative periods that the tick size would be effective.¹⁸⁰³ Much of the analysis of alternative measurement horizons for the time weighted quoted spread as well as alternative operative periods for tick sizes is contained in VII.D.1.d. In sum, the analysis in that section presents tradeoffs. On the one hand, a shorter evaluation period ties the tick size to the most recent market experience for a given stock potentially resulting in the most relevant tick size to be assigned. On the other hand, if that time period is associated with transient spikes in quoted spreads, such as during the first quarter of 2020 coincident with the onset of the Covid-19 pandemic, then the time period used to assign tick sizes would not be representative of current market conditions and a stock may be assigned a sub-optimal tick size.

There is also a tradeoff associated with the length of time that tick sizes are effective. More frequent updating means the tick size can adjust more rapidly to changes in the trading environment for a given stock and thus could increase the amount of trading volume associated with optimal tick sizes. The downside is that more frequent updates would also increase the cost and complexity of the amendments as market participants would have to adjust to tick sizes that change more frequently.

The Commission analyzed many iterations of evaluation period and tick size operative period and found evidence consistent with these tradeoffs.¹⁸⁰⁴ Consequently, depending on the combination of period used to determine the TWAQS and the effective period for the tick size, the total fraction of trading volume that trades in the preferred range may increase or decrease relative to the adopted amendments as suggested by the analysis in table 10. Additionally, the costs and complexity of the alternatives would similarly be affected by alternative horizons chosen with more frequent updating associated with higher costs and complexity and less frequent updating associated with lower costs and complexity relative to the adopted amendments.

For example, as shown in panel A of table 10, an alternative which would have a one-month evaluation period and

¹⁸⁰³ See, e.g., FIA PTG Letter II at 2 and JPMorgan Letter at 4.

¹⁸⁰⁴ See *supra* section VII.D.1.d.

a one-month effective period for a tick size would reduce the amount of estimated trading volume that trades with a wide tick and likely would have benefited from a smaller tick to 8.5%, compared to an estimated 13.7% in the adopted amendments. Consequently, more trading volume would be assigned a tick size that is expected to improve market quality for the stock. However, relative to the adopted amendments this alternative would have 12 tick size changes per year instead of the adopted 2 changes, thus it would increase the complexity and compliance costs associated with the rule. Overall, relative to the adopted amendments, this alternative results in a significant increase in complexity but only achieves a relatively modest increase in effectiveness in terms of trading volume with the appropriate tick size.

On the other side of the spectrum, a rule that uses a 12-month operative period could produce the opposite effect. It would reduce complexity somewhat by reducing the number of revisions, but with a significant decrease in effectiveness of the tiered tick size regime. For instance, again using data from table 10, this alternative would increase the amount of trading volume that retains the larger tick size but would likely benefit from a smaller tick size to 20.8%, up from an estimated 13.7% associated with the adopted amendments.

2. Access Fee Alternatives

a. 15 mils/30 mils Access Fee

Some commenters recommended adopting a two-tier approach to existing Rule 610(c)'s uniform maximum access fee cap. Specifically, these commenters recommended an access fee of 15 mils for stocks with a \$0.005 cent tick and maintaining the 30 mils maximum access fee for stocks that continue to have a \$0.01 cent tick (15 mils/30 mils alternative).¹⁸⁰⁵ This 15 mils/30 mils

¹⁸⁰⁵ See, e.g., NYSE Letter I at 7 and Nasdaq Letter IV at 2. Nasdaq's alternative assumes that the Commission will adopt only one additional reduced tick size bucket of \$0.005 and a uniform access fee of \$0.10. Nasdaq Letter IV. See also NYSE, Schwab, and Citadel Letter at 2 ("we recommend a reduction that is proportionate to the proposed reduction in the minimum quoting increment for tick-constrained symbols. This would reduce the current \$.0030/share cap to \$.0015/share for the symbols with a half-penny minimum quoting increment"); Nasdaq Letter I at 2; MMI Letter at 7 ("access fees should be scaled based on 30% of the minimum pricing increment"); Robinhood Letter at 5, 56–59 ("the Commission should tie access fee caps to be consistently proportional to the applicable tick size at the current proportion of 30%"); and MEMX Letter at 23–24 ("Lower the access fee cap in tick constrained NMS Stocks to \$0.0015 to maintain the proportionality of access fees and tick sizes, and include auction fees within the scope of the rule to

alternative would be applied to stocks priced \$1.00 or more.¹⁸⁰⁶

According to one commenter, this approach would be beneficial because the higher rebate cap for \$0.01 tick stocks would maintain incentives to provide on-exchange lit liquidity.¹⁸⁰⁷ The Commission acknowledges that the lower access fee cap on stocks with the higher tick is likely to widen spreads. As discussed in sections VII.D.2.c and VII.E.1, these wider spreads will not lead to a diminution of lit liquidity on exchanges. Rather, liquidity providers will adjust their quotes to reflect the change in fees and rebates, resulting in higher quoted spreads without an increase in transaction costs nor a decrease in lit liquidity.

Relative to the adopted amendments, this alternative would raise costs by causing stocks to oscillate between the two tick sizes, resulting in the tick size being consistently mis-assigned for the oscillating stocks. Specifically, the 15 mils/30 mils alternative would result in a feedback loop scenario on tick size assignment from tying fee caps to tick size. As discussed in sections VII.B.3 and VII.C.2.b, access fees are tied to rebates, which in turn influence quoted spreads. Consider, for example, a stock that trades in an Evaluation Period, on average, with a 1.4 cent TWAQS and 30 mils access fee cap (and rebate). Under the amendments to Rule 612, this stock would receive a 0.5 cent tick. If this stock were to also be subject to the 15 mils/30 mils alternative, it would thus be subject to a 15 mils fee cap once it receives the smaller tick size, instead of a 30 mils one, and its average TWAQS would increase to 1.7 cents (increase by twice the 0.15 cents reduction in rebates as result of the lower access fee cap).¹⁸⁰⁸ But with a

prevent competitive distortions that would otherwise result if listing exchanges were permitted to use auction fees to avoid a lower fee cap").

¹⁸⁰⁶ Commenters recommending this alternative did not address the treatment of sub \$1.00 stocks. For purposes of this discussion, we assume a proportionately reduced 0.15% access fee cap for those stocks. This access fee cap percentage relative to the adopted amendments would mitigate the expected reduction in exchanges' revenue resulting from the lower access fee cap. *Cf.* Choe Letter I (not recommending any reduction in access fees but, if access fees are reduced, recommending that the access fee [for stocks priced equal to or greater than \$1.00] should not be reduced below \$0.0015 for tick constrained securities with a \$0.005 [tick] increment. For securities priced less than \$1.00, the access fee cap must remain unchanged to support competition, differentiation, and liquidity provision.").

¹⁸⁰⁷ Nasdaq Letter IV at 11 and *passim*. See also *supra* notes 529 and 535 and accompanying text.

¹⁸⁰⁸ It is not necessary to assume that the exchange rebates the entire access fee. Rather, it is sufficient that the difference between the rebate under the access fee cap of 0.30 mils and the rebate

TWAQS of 1.7 cents the stock in a subsequent Evaluation Period would receive a tick of 1 cent and the access fee cap would again be 30 mils.¹⁸⁰⁹ At that point, the aforementioned process would begin again: the stock would yo-yo between tick sizes of 0.5 cents and 1 cent and access fee caps of 15 mils and 30 mils, generating investor confusion and additional costs.¹⁸¹⁰ In contrast, consider what would happen to this same stock under a uniform 10 mils access fee cap. The average quoted spread would widen from 1.4 cents to 1.8 cents, at which point the stock would not be subject to a tick size reduction and there would be no oscillations. The same problem would occur even with a lower threshold for a tick size reduction (e.g., if the TWAQS threshold for the 0.5 cent tick were to be set at 1.1 cents instead of 1.5 cents, then the 15 mils/30 mils alternative would result in spreads oscillating between 1.05 and 1.35 cents for some stocks, causing them to yo-yo between tick sizes). Moreover, oscillation would also occur if one were to add other metrics to the TWAQS threshold for smaller tick sizes because there will still be stocks near the TWAQS threshold. The simplest, and perhaps the only, way to avoid this feedback loop is to use a uniform access fee cap.

The 15 mils/30 mils alternative would also increase complexity because the higher level of fees and rebates create a larger wedge between the quoted half-spread and the true cost of demanding liquidity.¹⁸¹¹ Further, this alternative would reduce some benefits related to the minimum pricing increment, most substantially for stocks with the penny tick. As discussed in section VII.C.1.b, these stocks may have, at times, an economic spread that is less than one penny. At those times, the difference in

under the access fee cap of 0.15 mils is 0.15. The example is not changed if the rebate goes from 0.28 mils to 0.13 mils.

¹⁸⁰⁹ As discussed above in section VII.D.1, the stock's having a 0.5 cent tick would likely lead to a narrower quoted spread than 1.7 cents. However, if the smaller tick causes the quoted spread to fall by anything less than 0.2 cents, the tick and access fee cap would revert back to 1 cent and 30 mils after the next Evaluation Period.

¹⁸¹⁰ One commenter stated that, "the Commission should consider the possibility of tick size oscillation for some stocks that fall close to the threshold values for TWAS." The commenter stated that such oscillation will impose excessive costs. See Mitre Corp. Letter at 5. See also section VII.D.1.d for a quantitative analysis on the tradeoff between appropriate tick assignment and the number of tick changes when evaluating the length of the evaluation and operative periods. The oscillation discussed in this alternative does not present such a tradeoff—this oscillation results in both more tick changes and more tick misassignment.

¹⁸¹¹ See *supra* section VII.D.2.d.

outcome between a 30 mils and 10 mils access fee would be a relatively large reduction in distortions.¹⁸¹² For stocks assigned to the half-penny tick that remain tick-constrained, the reductions would be more minor in an absolute sense (15 mils versus 10 mils). The analysis for potential conflicts of interest is similar.¹⁸¹³ While the Commission acknowledges that there is some access fee that would be so low as to create strain on exchange business models, 10 mils appears well above this point.¹⁸¹⁴ Like the adopted amendments, this alternative would not affect an exchange's ability to earn its baseline net capture on trading volume priced greater than \$1.00.¹⁸¹⁵ This alternative may also result in complications for orders priced below \$1. Specifically, for orders priced below \$1 this alternative would lead to one of two outcomes that could have negative effects for stocks trading right at the \$1.00 threshold. For these stocks, the minimum pricing increment is \$0.0001 regardless of the access fee applied. If the fee cap for sub-\$1 orders were to be kept proportional at 0.30% and 0.15% for trades priced above \$1.00, then if those stocks prices drop below \$1.00 this would result in a situation where there was a group of stocks with the same tick size (*i.e.*, \$0.0001) but two different fee caps. This could place stocks with the higher fee cap at a competitive disadvantage relative to the stocks with the lower access fee cap. This outcome is also more complicated than both the baseline and adopted rule which both have at most one fee cap per tick size. Alternatively, if the fee cap for orders priced below \$1 were to be set uniformly at 0.30%, then this alternative would create a discontinuity in the cost of accessing liquidity at the \$1.00 price threshold for stocks assigned the 15 mils fee cap; likewise, if the fee cap for orders priced below \$1 were to be set uniformly at 0.15%, then it would create a discontinuity at the \$1.00 price point for stocks with the 30 mil fee cap. This discontinuity could create distortions in liquidity provision as discussed in section VII.D.2.c.¹⁸¹⁶ Consequently, this alternative results in either a situation in which there are two

¹⁸¹² See *supra* section VII.D.2.d. For stocks receiving the penny tick, the reduction in the access fee cap from 30 mils to 10 mils will reduce transaction costs for stocks that experience periods in which they are tick-constrained, and further reduce the probability that a stock becomes tick-constrained.

¹⁸¹³ See *supra* section VII.D.2.d.

¹⁸¹⁴ See *supra* section VII.D.2.b.

¹⁸¹⁵ See *supra* section VII.D.2.b.

¹⁸¹⁶ Specifically, see *supra* note 669, on the issue of discontinuities in the cost of accessing liquidity near the \$1 threshold.

fee caps for the \$0.0001 tick, or there exists a discontinuity in the cost of accessing liquidity at the \$1 price point causing distortions in liquidity provision. Thus, this alternative appears to create costs without corresponding benefits.

One commenter suggested the Commission plan to further study the question of access fee caps in combination with the change in the tick.¹⁸¹⁷ For the reasons discussed above and elsewhere in this release, the Commission adopts the 10 mil access fee cap. Commission staff, however, will review and study the effects of the amendments as described in section VII.D.

b. Higher or Lower Uniform Access Fee Cap

The Commission could have adopted different uniform access fee caps. An access fee cap must stay below 50% of the minimum pricing increment in order to preserve price coherence.¹⁸¹⁸ Alternatively, if the access fee cap is set below an exchanges' net capture rate, then it can adversely affect existing exchange pricing practices.¹⁸¹⁹ Some commenters suggested retaining the current uniform 30 mils cap for stocks with prices above \$1.00.¹⁸²⁰ A uniform 30 mils level would be above 50% of the minimum pricing increment under the adopted amendments, and thus would not preserve price coherence. Another commenter suggested a uniform access fee cap below 10 mils.¹⁸²¹

As discussed in section VII.D.2.b, exchanges have sufficient flexibility under the adopted amendments to maintain their current net-capture and agency business models on stocks with prices above \$1. A uniform access fee higher than 10 mils would afford exchanges more flexibility relative to the adopted amendments. For stocks with prices less than \$1.00, an access fee percentage (of the share price) higher than the adopted 0.1% would imply,

relative to the adopted amendments, a lower revenue loss on sub \$1.00 trading.¹⁸²² To illustrate with an example, if the access fee percentage were 0.15% instead of the adopted 0.10%, then exchanges' expected revenue loss on sub \$1.00 trading would be approximately \$41 million across those exchanges charging the full 0.30% under the baseline, instead of approximately \$55 million under the adopted amendments.¹⁸²³ The main cost of an access fee cap above 10 mils would be to increase transaction costs for stocks with economic spreads smaller than the minimum pricing increment.¹⁸²⁴ Also, an access fee cap higher than 10 mils would allow for a greater wedge to exist between displayed prices and the net prices that are actually realized, potentially undermining price transparency.

In contrast, if the access fee caps were set below the adopted levels, then the effects described in the prior paragraph would all flip. Namely, relative to the adopted amendments, transaction costs for stocks with economic spreads smaller than the minimum pricing increment would be lower, and there could exist a smaller wedge between displayed prices and the net prices that are actually realized, potentially improving price transparency. However, relative to the adopted amendments, exchanges could no longer have sufficient flexibility to earn their net capture on stocks with prices above \$1.00, and exchanges would incur a greater loss in revenue on sub \$1.00 trading.

An access fee cap higher than the adopted 10 mils, and the associated higher rebates, also exacerbates the potential conflict of interest for broker-dealers who route customers' orders to the exchanges. As discussed in section VII.D.3, fees and rebates introduce the potential for a conflict of interest if those fees and rebates are not fully passed through to the routing broker-dealers' customers. A higher access fee cap would increase the potential proceeds a broker-dealer would receive if it acted on the conflict of interest. A lower access fee cap would decrease the differences between the fees and rebates

offered by different exchanges, which would decrease the potential proceeds a broker-dealer would receive if it acted on the conflict of interest.

Additionally, relative to the adopted amendments to Rule 610(c), a lower access fee cap could hinder an exchange's ability to differentiate itself from other exchanges on the basis of its pricing schedule, whereas a higher access fee cap could enable more differentiation. As discussed in section VII.E.2.b, the Commission expects that exchanges will continue to set fees and rebates at or near the access fee cap; therefore, a higher or lower access fee cap would likely have minimal effect on pricing differentiation across exchanges. For retail investors, an access fee cap different from the adopted levels would likely have little effect on retail market quality for reasons discussed earlier.¹⁸²⁵ With regard to exchange trading versus off-exchange trading, as discussed above,¹⁸²⁶ an access fee cap lower than the adopted level could bring more trading volume onto exchanges by further relieving tick constraints that drive volume off-exchange. A higher access fee cap would reverse these effects.

VIII. Paperwork Reduction Act

Certain provisions of the rules and rule amendments contain "collection of information requirements" within the meaning of the Paperwork Reduction Act of 1995 ("PRA").¹⁸²⁷ The Commission requested comment on the collection of information requirements in the Regulation NMS Proposal and submitted relevant information to the Office of Management and Budget ("OMB") for review in accordance with 44 U.S.C. 3507(d) and 5 CFR 1320.11. The title of the new collection of information is "Odd-Lot Information Acceleration." An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the agency displays a currently valid control number. The Commission has received an OMB control number (3235-0802) for this collection of information.

One commenter stated that the hourly rates for certain positions were inconsistent across the four proposals related to separate aspects of equity market structure and Regulation NMS.¹⁸²⁸ No other comments were received discussing the PRA. The hourly rates used to monetize burden

¹⁸¹⁷ Nasdaq Letter IV at 11. This commenter recommended this alternative as phase 1 in a three-phase data gathering process where, in phase 2, the Commission would collect a year of data from phase 1's changes and then consider a further access fee cap reduction for stocks with a \$0.005 tick. In phase 3, the Commission would collect an additional year of data to consider a lower fee cap for stocks with a \$0.01 tick. *Id.* at 2 and 11.

¹⁸¹⁸ See *supra* section VII.D.2.a.

¹⁸¹⁹ If the access fee cap was set below an exchange's net capture rate, then its profitability would decrease because it would no longer be able to charge fees high enough to cover any non-negative rebate. To retain the same net capture rate, the exchange would have to charge a negative rebate (*i.e.*, a fee), which would represent a major change in pricing model.

¹⁸²⁰ See Citigroup Letter at 6, WFE Letter at 4.

¹⁸²¹ See IEX Letter IV at nn.14 and 21.

¹⁸²² See *supra* section VII.D.2.b for a discussion of lost revenue under the adopted amendments.

¹⁸²³ See table 14 in *supra* section VII.D.2.b. In that table, if the access fee percentage were 0.15% instead of the adopted 0.10% then the lost revenue on sub \$1.00 trading would be approximately \$41 million across exchanges charging the full 0.30% under the baseline.

¹⁸²⁴ For stocks with wider economic spreads, the higher access fee would most likely reduce the spread in equilibrium, implying little or no effect on transaction costs. See *supra* sections VII.B.3 and VII.D.2.c

¹⁸²⁵ See *supra* note 1480 and surrounding text.

¹⁸²⁶ See *supra* section VII.E.2.b.

¹⁸²⁷ 44 U.S.C. 3501 *et seq.*

¹⁸²⁸ See Data Boiler Letter I at 16 (identifying what it termed "inconsistent rates" for the Attorney and Compliance Manager positions).

hours differ across releases in order to account for changes in inflation rates. Consistent with this approach, the hourly rate figures discussed below have been updated from those cited in the Proposing Release to reflect recent inflation rates. In addition, certain estimates outlined in the MDI Adopting Release have been modified, as discussed in section VII.G below, to conform to the adopted amendments.

A. Summary of Collection of Information

The rule amendments include a collection of information within the meaning of the PRA. Specifically, the amendments to Rule 603(b) require the exclusive SIPs to collect, consolidate, and disseminate odd-lot information, including the best odd-lot orders to buy and sell. The exclusive SIPs are also required to disseminate indicators of the applicable round lot size and minimum pricing increment for each NMS stock, both of which will be provided to the exclusive SIPs by the primary listing exchange.

B. Proposed Use of Information

The information collected under the amendments to Rule 603(b) will be consolidated and disseminated by the exclusive SIPs to market participants who will use this odd-lot information for trading. Widespread availability of odd-lot information promotes fair and efficient markets and facilitates the ability of brokers and dealers to trade more effectively and to provide best execution to their customers. The round lot and minimum pricing increment indicators that will be disseminated by the exclusive SIPs will provide market participants with information about the parameters for trading in a particular NMS stock.

C. Respondents

The collection of information under amended Rule 603(b) will apply to the two exclusive SIPs.

D. Total Annual Reporting and Recordkeeping Burden

1. Initial Burden Hours and Costs

The two exclusive SIPs will have to modify their systems to collect, consolidate, and disseminate the odd-lot information, including the best odd-lot orders to buy and sell, that they do not currently collect, consolidate, and disseminate¹⁸²⁹ and to disseminate the round-lot and minimum pricing increment indicators provided by the primary listing exchange. These

modifications will involve the addition of new hardware, network infrastructure, and bandwidth, as well as programming and development costs, to take in additional inbound odd-lot quotation messages from SROs, to calculate odd-lot information, and to consolidate and disseminate odd-lot information and the round lot and minimum pricing increment indicators to subscribers.

The Commission estimates that each exclusive SIP will incur 440 initial burden hours to modify its systems to collect, calculate, consolidate and disseminate odd-lot information and to disseminate the round-lot and minimum pricing increment indicators¹⁸³⁰ and initial external costs of \$412,500 to purchase the necessary technology to effect such modifications.¹⁸³¹ Thus, the Commission estimates that the total initial burden hours for two exclusive SIPs will be 880 burden hours¹⁸³² and that total initial external costs would be \$825,000.¹⁸³³

¹⁸³⁰ The Commission estimates the monetized initial burden for this requirement to be \$167,670, broken down as follows: [(Sr. Programmer at \$399/hour for 210 hours) + (Sr. Systems Analyst at \$343/hour for 180 hours) + (Compliance Manager at \$373/hour for 20 hours) + (Director of Compliance at \$588/hour for 10 hours) + (Compliance Attorney at \$440/hour for 20 hours)] = 440 initial burden hours to modify its systems to comply with the requirement to collect, calculate, and disseminate odd-lot information. The Commission based these estimates on 10% of the initial burden hour estimates for each exclusive SIP to become a competing consolidator provided in the MDI Rules to account for the fact that these amendments do not require the exclusive SIPs to calculate and disseminate full consolidated market data (e.g., depth of book data or auction information) as defined in the MDI Rules. See MDI Adopting Release, *supra* note 10, at 18712–13. The Commission derived the hourly rate figures from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

¹⁸³¹ The Commission arrived at this estimate by dividing the initial external cost estimate provided in the MDI Rules for each exclusive SIP to become a competing consolidator by three to account for the fact that the exclusive SIPs would not need to build aggregation systems in three separate data centers to collect, calculate, and disseminate odd-lot information. See MDI Adopting Release, *supra* note 10, at 18712–13.

¹⁸³² The Commission estimates the monetized initial burden for this requirement to be \$335,340, broken down as follows: [(Sr. Programmer at \$399/hour for 210 hours) + (Sr. Systems Analyst at \$343/hour for 180 hours) + (Compliance Manager at \$373/hour for 20 hours) + (Director of Compliance at \$588/hour for 10 hours) + (Compliance Attorney at \$440/hour for 20 hours)] × [(2 exclusive SIPs)] = 880 total initial burden hours across the exclusive SIPs.

¹⁸³³ The Commission estimates total initial external costs as follows: initial external costs of \$412,500 per exclusive SIP × (2 exclusive SIPs) = \$825,000.

2. Ongoing Burden Hours and Costs

The Commission believes that the two exclusive SIPs will incur annual ongoing burden hours and external costs to operate and maintain their modified systems to collect, calculate, and disseminate odd-lot information and to disseminate the round-lot and minimum pricing increment indicators. The Commission estimates that each exclusive SIP will incur 132 ongoing, annual burden hours¹⁸³⁴ and ongoing, annual external costs of \$123,725 to operate and maintain its systems to collect, calculate, and disseminate odd-lot information and to disseminate the round-lot and minimum pricing increment indicators.¹⁸³⁵ Thus, the Commission estimates that the total ongoing, annual burden hours for two exclusive SIPs will be 264 burden hours¹⁸³⁶ and that total ongoing, annual external costs would be \$247,450.¹⁸³⁷

¹⁸³⁴ The Commission estimates the monetized annual ongoing burden for this requirement to be \$50,301, broken down as follows: [(Sr. Programmer at \$399/hour for 63 hours) + (Sr. Systems Analyst at \$343/hour for 54 hours) + (Compliance Manager at \$373/hour for 6 hours) + (Director of Compliance at \$588/hour for 3 hours) + (Compliance Attorney at \$440/hour for 6 hours)] = 132 ongoing, annual burden hours to operate and maintain its systems to comply with the requirement to collect, calculate, and disseminate odd-lot information. The Commission based these estimates on 10% of the ongoing, annual burden hour estimates provided in the MDI Rules for each exclusive SIP competing consolidator to operate and maintain its systems to comply with Rules 614(d)(1) through (4) to account for the fact that these amendments do not require the exclusive SIPs to calculate and disseminate full consolidated market data (e.g., depth of book data or auction information) as defined in the MDI Rules. See MDI Adopting Release, *supra* note 10, at 18712–13. The Commission derived the hourly rate figures from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

¹⁸³⁵ The Commission arrived at this estimate by dividing by three the ongoing, annual external cost estimate provided in the MDI Rules for each exclusive SIP competing consolidator to operate and maintain its systems to comply with rules 614(d)(1) through (4) to account for the fact that the exclusive SIPs will not need to build aggregation systems in three separate data centers to collect, calculate, and disseminate odd-lot information. See MDI Adopting Release, *supra* note 10, at 18712–13.

¹⁸³⁶ The Commission estimates the monetized annual ongoing burden for this requirement to be \$100,602, broken down as follows: [(Sr. Programmer at \$399/hour for 63 hours) + (Sr. Systems Analyst at \$343/hour for 54 hours) + (Compliance Manager at \$373/hour for 6 hours) + (Director of Compliance at \$588/hour for 3 hours) + (Compliance Attorney at \$440/hour for 6 hours)] × (2 exclusive SIPs) = 264 total ongoing, annual burden hours across the exclusive SIPs.

¹⁸³⁷ The Commission estimates total annual ongoing external costs as follows: annual ongoing external costs of \$123,725 per exclusive SIP × (2 exclusive SIPs) = \$247,450.

¹⁸²⁹ The exclusive SIPs currently disseminate odd-lot transaction data.

E. Collection of Information Is Mandatory

The collection of information discussed above is a mandatory.

F. Confidentiality

This information collection will be public.

G. Revisions to Current MDI Rules Burden Estimates

Currently, the MDI Rules impose “collection of information” requirements within the meaning of the PRA. Specifically, pursuant to Rule 603(b), SROs are required to make available all data necessary to generate consolidated market data to competing consolidators and self-aggregators. As explained in more detail below, the Commission is revising the burden estimates associated with this requirement in light of the amendments. In the MDI Rules, the Commission estimated that each SRO will require an average of 220 initial burden hours of legal, compliance, information technology, and business operations personnel time to prepare and implement a system to collect the information necessary to generate consolidated market data (for a total cost per SRO of \$70,865).¹⁸³⁸ The Commission estimated that each SRO would incur an annual average burden on an ongoing basis of 396 hours to collect the information necessary to generate consolidated market data required by Rule 603(b) (for a total cost per SRO of \$128,064).¹⁸³⁹

As described above, the amendments to Rule 603(b) require SROs to make available all data necessary to generate odd-lot information to the exclusive SIPs whereas, under the decentralized consolidation model set forth in the

MDI Rules, consolidated market data would be provided by competing consolidators and self-aggregators. The SROs already provide certain quotation information to the exclusive SIPs, and many SROs already provide odd-lot quotation information to customers through their proprietary data feeds.¹⁸⁴⁰ Nevertheless, providing the exclusive SIPs with the data necessary to generate odd-lot information may entail additional burdens. Specifically, technical development work may be needed to direct odd-lot quotations to the exclusive SIPs and to expand the capacity of the existing connections (including acquiring the necessary hardware, network capabilities and power) through which the SROs provide data to the exclusive SIPs to support the additional message traffic associated with odd-lot quotations. Therefore, the Commission is revising its burden estimates for Rule 603(b) upwards by 5% to account for the provision of the data necessary to generate odd-lot information to the exclusive SIPs.¹⁸⁴¹ Specifically, the Commission is adding 11 initial burden hours¹⁸⁴² and 19.8 annual burden hours¹⁸⁴³ to its previous estimates.

In addition, the amendments require the primary listing exchange for each NMS stock to provide an indicator of the round lot size to the applicable exclusive SIP for dissemination and to calculate and provide to competing consolidators, self-aggregators, and the

applicable exclusive SIP an indicator of the applicable minimum pricing increment for dissemination. The primary listing exchange is already required to calculate the applicable round lot size and provide it to competing consolidators and self-aggregators under the MDI Rules, and the incremental burden of providing this indicator to the two exclusive SIPs is likely to be minimal. However, calculating the applicable minimum pricing increment and providing it to competing consolidators, self-aggregators, and the exclusive SIPs will entail additional burdens.

Specifically, primary listing exchanges will need to program systems to calculate the applicable minimum pricing increment for each NMS stock that they list semiannually based on its TWAQS and to include this information in the data that they provide to competing consolidators, self-aggregators, and the exclusive SIPs. Therefore, the Commission revising its burden estimates for Rule 603(b) upwards to account for the calculation of the applicable minimum pricing increment and the provision of this information to competing consolidators, self-aggregators, and the exclusive SIPs. Specifically, the Commission is adding 50 initial burden hours¹⁸⁴⁴ and 32 annual burden hours¹⁸⁴⁵ for each primary listing exchange to its previous estimates and 250 total initial burden hours¹⁸⁴⁶ and 160 total annual burden hours¹⁸⁴⁷ for five primary listing exchanges.

In addition, the MDI Rules include a collection of information requirement

¹⁸³⁸ In the MDI Adopting Release, the Commission estimated the monetized initial burden for this requirement to be \$70,865. The Commission derived this estimate based on per hour figures from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead: [(Compliance Manager at \$310 for 105 hours) + (Attorney at \$417 for 70 hours) + (Sr. Systems Analyst at \$285 for 20 hours) + (Operations Specialist at \$137 for 25 hours)] = 220 initial burden hours and \$70,865.

¹⁸³⁹ In the MDI Adopting Release, the Commission estimated the monetized ongoing, annual burden for this requirement to be \$128,064. The Commission derived this estimate based on per hour figures from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead: [(Compliance Manager at \$310 for 192 hours) + (Attorney at \$417 for 48 hours) + (Sr. Systems Analyst at \$285 for 96 hours)] = 336 initial burden hours and \$128,064.

¹⁸⁴⁰ See MDI Adopting Release, *supra* note 10, at 18599.

¹⁸⁴¹ The Commission believes that 5% of the initial and ongoing, annual burden hour estimates provided in the MDI Rules for each SRO to make the data necessary to generate consolidated market data available to competing consolidators and self-aggregators is appropriate because the SROs already collect the data necessary to generate odd-lot information and this information is a subset of consolidated market data as defined in the MDI Rules.

¹⁸⁴² The Commission estimates the monetized initial burden for this requirement to be \$4,261. The Commission derived this estimate based on per hour figures from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead: [(Compliance Manager at \$373 for 5.25 hours) + (Attorney at \$501 for 3.5 hours) + (Sr. Systems Analyst at \$343 for 1 hour) + (Operations Specialist at \$165 for 1.25 hours)] = 11 initial burden hours and \$4,261.

¹⁸⁴³ The Commission estimates the monetized ongoing, annual burden for this requirement to be \$7,646.6. The Commission derived this estimate based on per hour figures from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead: [(Compliance Manager at \$373 for 10.6 hours) + (Attorney at \$501 for 3.4 hours) + (Sr. Systems Analyst at \$343 for 5.8 hours)] = 19.8 annual burden hours and \$7,646.6.

¹⁸⁴⁴ The Commission estimates the monetized initial burden for this requirement to be \$19,000 per primary listing exchange. Salaries are derived from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1,800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits and overhead: [(Sr. Programmer at \$368 for 25 hours) + (Sr. Systems Analyst at \$316 for 10 hours) + (Compliance Manager at \$344 for 10 hours) + (Director of Compliance at \$542 for 5 hour)] = \$19,000 per listing exchange). See *supra* notes 1644–1645 and accompanying text.

¹⁸⁴⁵ The Commission estimates the monetized ongoing, annual burden for this requirement to be \$9,000 per primary listing exchange. ((Compliance Attorney at \$406 for 6 hours) + (Compliance Manager at \$344 for 2 hours)) × 4 tick size revisions per year = \$9,000 per listing exchange. *Id.*

¹⁸⁴⁶ 50 initial burden hours per primary listing exchange × 5 primary listing exchanges = 250 total initial burden hours. The Commission estimates the total monetized initial burden of this requirement to be \$95,000 (\$19,000 per primary listing exchange × 5 primary listing exchanges = \$95,000). *Id.*

¹⁸⁴⁷ 32 annual burden hours per primary listing exchange × 5 primary listing exchanges = 160 total annual burden hours. The Commission estimates the total monetized annual burden of this requirement to be \$45,000 (\$9,000 per primary listing exchange × 5 primary listing exchanges = \$45,000). *Id.*

under rules 614(d)(1) through (3), which require competing consolidators to collect from the SROs quotation and transaction information for NMS stocks, calculate and generate a consolidated market data product, and make the consolidated market data product available to subscribers.¹⁸⁴⁸ As discussed above, the amended definition of odd-lot information includes a specified best odd-lot order to buy and best odd-lot order to sell. Since the odd-lot quotes that a competing consolidator would use to identify and disseminate the best odd-lot orders—if the competing consolidator offers a consolidated market data product that includes this information—are already included in the data necessary to generate odd-lot information, the Commission believes that the existing burden estimates for rules 614(d)(1) through (3) account for the identification and dissemination of the best odd-lot orders.

IX. Regulatory Flexibility Act

The Regulatory Flexibility Act (“RFA”) requires the Commission, in promulgating rules,¹⁸⁴⁹ to consider the impact of those rules on small entities. This Final Regulatory Flexibility Analysis has been prepared in accordance with section 604 of the RFA.¹⁸⁵⁰ The Commission prepared an Initial Regulatory Flexibility Analysis and a Regulatory Flexibility Act certification in accordance with the RFA and included in the Proposing Release.¹⁸⁵¹

In the Proposing Release, the Commission certified that the proposed amendments to Rules 600, 603 and 610 would not have a significant economic impact on a substantial number of small entities for purposes of the RFA.¹⁸⁵² The Proposing Release solicited comments on the certification. The Commission received no comments on this certification.

With respect to Rule 612, an initial Regulatory Flexibility Analysis (“IFRA”) was prepared in accordance with the RFA and was included in the Proposing Release.¹⁸⁵³ The Commission has prepared this Final Regulatory Flexibility Analysis (“FRFA”) in accordance with section 604 of the

RFA.¹⁸⁵⁴ The Commission did not receive comments on the IRFA.

A. Amendments to Rule 612—Final Regulatory Flexibility Analysis

1. Reasons for the Action

As discussed in section III, the Commission is adopting amendments to Rule 612 to update and modernize the rule for the current trading environment. As adopted, Rule 612 will reduce minimum pricing increment for orders and quotes priced \$1.00 or greater for certain NMS stocks.

2. Small Entities Subject to the Rule

Rule 612 would apply to national securities exchanges, national securities associations, ATSs, vendors, and broker or dealers.

National securities exchanges are not small entities as defined by Commission rules. Exchange Act rule 0–10(e)¹⁸⁵⁵ states that the term “small business” when referring to an exchange means any exchange that has been exempted from the reporting requirements of Exchange Act rule 601 and is not affiliated with any person that is not a small business or small organization. There is only one national securities association, and the Commission has previously stated that it is not a small entity as defined by 13 CFR 121.201.¹⁸⁵⁶

Commission rule 0–10(c) defines a broker-dealer as a small entity for the purpose of this section if the broker-dealer had a total capital (net worth plus subordinated liabilities) of less than \$500,000 on the date in the prior fiscal year as of which its audited financial statements were prepared, had less than \$200 million of funds and securities in its custody of control at all times during the preceding fiscal year, and the broker-dealer is not affiliated with any person (other than a natural person) that is not a small entity.¹⁸⁵⁷ The Commission is updating the estimate from the Proposing Release and estimates that as of December 31, 2023, there were approximately 734 Commission registered broker-dealers that would be small entities for purposes of the statute that would be required to comply with the amendments to Rule 612 regarding quotation in the minimum pricing increments.¹⁸⁵⁸ The updated estimate

number is approximately 3.5% lower and does not impact the Commission’s analysis.

Rule 612 applies to NMS stocks and the rule would apply to NMS Stock ATSs. NMS Stock ATSs that are not registered as exchanges are required to register as broker-dealers.¹⁸⁵⁹ Accordingly, NMS Stock ATSs would be considered small entities if they fall within the standard for small entities that would apply to broker-dealers. The Commission examined FOCUS data for the 33 broker-dealers that currently operate NMS Stock ATSs and, applying the test for broker-dealers described above, believes that none of the NMS Stock ATSs currently trading NMS stocks were operated by a broker-dealer that is a “small entity.”¹⁸⁶⁰

A vendor is defined in rule 600(b)(100) of Regulation NMS as any SIP engaged in the business of disseminating transaction reports, last sale data, or quotations with respect to NMS securities to brokers, dealers, or investors on a real-time or other current and continuing basis, whether through an electronic communications network, moving ticker, or interrogation device.¹⁸⁶¹ Commission rule 0–10(g) states that the term small business when referring to a SIP, means any SIP that had gross revenues of less than \$10 million during the preceding year, provided service to fewer than 100 interrogation devices or moving tickers at all times during the preceding year, and is not affiliated with any person that is not a small business or small organization.¹⁸⁶² The Commission estimates as of August 31, 2022, that there are approximately 80 vendors, 13 of which would be small entities.

3. Reporting, Recordkeeping, and Other Compliance Requirements

Rule 612 will not impose any new reporting, recordkeeping, or other compliance requirements on market participants that are small entities.

4. Significant Alternatives

Pursuant to section 3 of the RFA, the Commission must consider the following types of alternatives: (a) the establishment of differing compliance or

dealers that would be small entities for purposes of the statute.

¹⁸⁵⁹ See rule 301(b)(1) of Regulation ATS.

¹⁸⁶⁰ A list of NMS Stock ATSs with Form ATS on file with the Commission is available at <https://www.sec.gov/about/divisions-offices/division-trading-markets/alternative-trading-systems/form-ats-n-filings-information#ats-n>. The Commission examined the list as of January 31, 2024. The number of broker-dealers that operate NMS Stock ATSs has not changed from the Proposing Release.

¹⁸⁶¹ See 17 CFR 242.600(b)(100).

¹⁸⁶² See 17 CFR 242.0–10(g).

¹⁸⁴⁸ MDI Adopting Release, *supra* note 10, at 18703.

¹⁸⁴⁹ 5 U.S.C. 553.

¹⁸⁵⁰ See 5 U.S.C. 604.6.

¹⁸⁵¹ See section VIII of the Proposing Release, *supra* note 11.

¹⁸⁵² See *supra* id.

¹⁸⁵³ See section VIII of the Proposing Release, *supra* note 11. See *supra* section VII.B.

¹⁸⁵⁴ 5 U.S.C. 604.

¹⁸⁵⁵ 17 CFR 240.0–10(e).

¹⁸⁵⁶ See Securities Exchange Act Release No. 62174 (May 26, 2010), 75 FR 32556 (June 8, 2010) (“FINRA is not a small entity as defined by 13 CFR 121.201.”).

¹⁸⁵⁷ 17 CFR 240.0–10(c).

¹⁸⁵⁸ In the Proposing Release, the Commission estimated that as of June 30, 2022, there were approximately 761 Commission registered broker-

reporting requirements or timetables that take into account the resources available to small entities; (b) the clarification, consolidation, or simplification of compliance and reporting requirements under the proposed rule for small entities; (c) the use of performance rather than design standards; and (d) an exemption from coverage of the proposed rule, or any part thereof, for small entities.

The primary goal of Rule 612 is to provide uniform minimum pricing increments for NMS stocks. This primary goal continues with the amendments to Rule 612. As such, imposing different compliance or reporting requirements or possibly a different timetable for implementing compliance or reporting requirements, for small entities, could undermine the goal of uniformity. In addition, the Commission has concluded similarly that it would not be consistent with the primary goal to further clarify, consolidate, or simplify the amendments to Rule 612 for small entities. The amendments to Rule 612 are performance standards and do not dictate for entities of any size any particular design standards, *e.g.*, technology, that must be employed to achieve the objectives of the rule. It would be inconsistent with the purposes of the Exchange Act to specify different requirements for small entities or to exempt broker-dealers from the amendments to Rule 612.

B. Amendments to Rule 610

The changes to Rule 610(c) would apply to trading centers as defined in rule 600(b)(95) that impose fees for access against a protected quotation or any other quotation of the trading center that is the best bid or best offer of a national securities exchange or national securities association. As discussed above, currently national securities exchanges are the only trading centers publishing protected quotations. Pursuant to rule 0–10(e), none of the national securities exchanges are small entities for purposes of the RFA.¹⁸⁶³

New Rule 610(d) will require all fees charged and rebates paid by national securities exchanges to be determinable at the time of execution. Pursuant to rule 1–10(e), none of the national securities exchanges are small entities for purposes of the RFA.¹⁸⁶⁴

C. Amendments to Rule 603 and Definitions Odd-Lot Information and Regulatory Data Under Rule 600

The amendments to Rule 603(b) and to the definitions of odd-lot information and regulatory data in rule 600(b) would apply to national securities exchanges registered with the Commission under section 6 of the Exchange Act, national securities associations registered with the Commission under section 15A of the Exchange Act, and the exclusive SIPs. As stated above, pursuant to rule 0–10(e), none of the national securities exchanges small entities for the purposes of the RFA.¹⁸⁶⁵ There is one national securities association, and the Commission has previously stated that it is not a small entity.¹⁸⁶⁶ With respect to the exclusive SIPs, neither SIAC nor Nasdaq meet the criteria for a “small business” or “small organization” when used with reference to a securities information processor.¹⁸⁶⁷ Thus the amendments to rules 600(b) and 603(b) would not affect any small entities. For the purposes of the RFA, the Commission certifies that the amendments to Rule 603(b) and rule 600(b) would not have a significant economic impact on a substantial number of small entities.

D. Certification

For the reasons described above, the Commission certifies that the final amendments to Rules 600, 603(b) and 610 would not have a significant economic impact on a substantial number of small entities for purposes of the RFA.

X. Other Matters

Pursuant to the Congressional Review Act,¹⁸⁶⁸ the Office of Information and Regulatory Affairs has designated these rules as a “major rule” as defined by 5 U.S.C. 804(2). The Commission considers the provisions of the final amendments to be severable to the fullest extent permitted by law. “If parts of a regulation are invalid and other parts are not,” courts “set aside only the invalid parts unless the remaining ones cannot operate by themselves or unless the agency manifests an intent for the entire package to rise or fall together.” *Bd. of Cnty. Commissioners of Weld Cnty. v. EPA*, 72 F.4th 284, 296 (D.C. Cir. 2023); *see K mart Corp. v. Cartier, Inc.*, 486 U.S. 281, 294 (1988). “In such

an inquiry, the presumption is always in favor of severability.” *Cnty. for Creative Non-Violence v. Turner*, 893 F.2d 1387, 1394 (D.C. Cir. 1990). Consistent with these principles, while the Commission believes that all provisions of the final amendments are fully consistent with governing law, if any of the provisions of these amendments, or the application thereof to any person or circumstance, is held to be invalid, the Commission intends that such invalidity shall not affect other provisions or application of such provisions to other persons or circumstances that can be given effect without the invalid provision or application. In particular, the amendments relating to round lots, odd-lot information, Rule 610(c), and Rule 610(d) can operate independently from each other and from the amendments related to Rule 612. Additionally, the amendments to Rule 612 can operate independently from the amendments relating to round lots, odd-lot information, and Rule 610(d).

Statutory Authority and Text of Rule Amendments

Pursuant to the Exchange Act, and particularly sections 2, 3(b), 5, 6, 11, 11A, 15, 15A, 17, 19, 23(a), and 36 thereof, 15 U.S.C. 78b, 78c, 78e, 78f, 78k, 78k–1, 78o, 78o–3, 78q, 78s, 78w(a), and 78mm the Commission is amending sections 242.600, 242.603, 242.610, and 242.612 of chapter II of title 17 of the Code of Federal Regulations.

List of Subjects in 17 CFR Part 242

Brokers, Confidential business information, Fraud, Reporting and recordkeeping requirements, Securities.

For the reasons stated in the preamble, the Commission is amending title 17, chapter II of the Code of Federal Regulations as follows:

PART 242—REGULATIONS M, SHO, ATS, AC, NMS, AND SBSR, AND CUSTOMER MARGIN REQUIREMENTS FOR SECURITY FUTURES

■ 1. The authority citation for part 242 continues to read as follows:

Authority: 15 U.S.C. 77g, 77q(a), 77s(a), 78b, 78c, 78c–4, 78g(c)(2), 78i(a), 78j, 78k–1(c), 78l, 78m, 78n, 78o(b), 78o(c), 78o(g), 78q(a), 78q(b), 78q(h), 78w(a), 78dd–1, 78mm, 80a–23, 80a–29, 80a–37, and 8343.

■ 2. Amend § 242.600 by:

- a. In paragraph (b)(69)(i), removing the word “and” from the end of the paragraph;
- b. In paragraph (b)(69)(ii), removing the period at the end of the paragraph and adding the text “; and” in its place;
- c. Adding paragraph (b)(69)(iii);

¹⁸⁶³ See 17 CFR 240.0–10(e).

¹⁸⁶⁶ See *supra* note 1856.

¹⁸⁶⁷ See 17 CFR 240.0–10(g). See also Securities Exchange Act Release No. 61595 (Feb. 26, 2010), 75 FR 11232, 11320 (Mar. 10, 2010) (determining that SIAC and Nasdaq are not small entities for purposes of the RFA).

¹⁸⁶⁸ 5 U.S.C. 801 *et seq.*

¹⁸⁶³ See 17 CFR 240.0–10(e).

¹⁸⁶⁴ *Id.*

■ d. In paragraph (b)(89)(i)(D), removing the word “and” from the end of the paragraph;

■ e. In paragraph (b)(89)(i)(E), removing the period from the end of the paragraph and adding the text “; and” in its place;

■ f. Adding paragraphs (b)(89)(i)(F) and (89)(iv); and

■ g. Revising and republish paragraph (b)(93).

The additions and revisions read as follows:

§ 242.600 NMS security designation and definitions.

* * * * *

(b) * * *
(69) * * *

(iii) *Best odd-lot order to buy and best odd-lot order to sell.* The best odd-lot order to buy means the highest priced odd-lot order to buy that is priced higher than the national best bid, and the best odd-lot order to sell means the lowest priced odd-lot order to sell that is priced lower than the national best offer, for an NMS stock that are calculated and disseminated on a current and continuing basis by a competing consolidator or plan processor or calculated by a self-aggregator; provided, that in the event two or more market centers transmit to a competing consolidator, plan processor, or a self-aggregator identical odd-lot buy orders or odd-lot sell orders for an NMS stock, the highest priced odd-lot buy order or lowest priced odd-lot sell order (as the case may be) shall be determined by ranking all such identical odd-lot buy orders or odd-lot sell orders (as the case may be) first by size (giving the highest ranking to the odd-lot buy order or odd-lot sell order associated with the largest size), and then by time (giving the highest ranking to the odd-lot buy order or odd-lot sell order received first in time).

* * * * *

(89) * * *
(i) * * *

(F) An indicator of the applicable minimum pricing increment required under § 242.612.

* * * * *

(iv) The primary listing exchange shall also provide the information required under paragraphs (b)(89)(i)(E) and (F) of this section to the applicable plan processor for dissemination.

* * * * *

(93) *Round lot* means:

(i) For any NMS stock for which the average closing price on the primary listing exchange during the prior Evaluation Period was:

(A) \$250.00 or less per share, an order for the purchase or sale of an NMS stock of 100 shares;

(B) \$250.01 to \$1,000.00 per share, an order for the purchase or sale of an NMS stock of 40 shares;

(C) \$1,000.01 to \$10,000.00 per share, an order for the purchase or sale of an NMS stock of 10 shares;

(D) \$10,000.01 or more per share, an order for the purchase or sale of an NMS stock of 1 share; and

(ii) *New NMS stocks.* Any security that becomes an NMS stock during an operative period as described in paragraph (b)(93)(iv) of this section shall be assigned a round lot of 100 shares.

(iii) For purposes of this section only, the Evaluation Period means:

(A) All trading days in March for the round lot assigned on the first business day of May; and

(B) All trading days in September for the round lot assigned on the first business day of November during which the average closing price of an NMS stock on the primary listing exchange shall be measured by the primary listing exchange to determine the round lot for each NMS stock.

(iv) The round lot assigned under this section shall be operative on:

(A) The first business day of May for the March Evaluation Period and continue through the last business day of October of the calendar year; and

(B) The first business day of November for the September Evaluation Period and continue through the last business day of April of the next calendar year.

* * * * *

■ 3. Amend § 242.603 by revising the section heading and paragraph (b) to read as follows:

§ 242.603 Distribution, consolidation, dissemination, and display of information with respect to quotations for and transactions in NMS stocks.

* * * * *

(b) *Consolidation and dissemination of information.* (1) Application of paragraphs (b)(2) and (3) of this section:

(i) Compliance with paragraph (b)(3) of this section is required until the date indicated by the Commission in any order approving amendments to the effective national market system plan(s) to effectuate a cessation of the operations of the plan processors that disseminate consolidated information regarding NMS stocks.

(ii) Compliance with paragraph (b)(2) of this section is required 180 calendar days from the date of the Commission's approval of the amendments, filed as required under § 242.614(e), to the effective national market system plan(s).

(2) Every national securities exchange on which an NMS stock is traded and national securities association shall act

jointly pursuant to one or more effective national market system plans for the dissemination of consolidated market data. Every national securities exchange on which an NMS stock is traded and national securities association shall make available to all competing consolidators and self-aggregators its information with respect to quotations for and transactions in NMS stocks, including all data necessary to generate consolidated market data, in the same manner and using the same methods, including all methods of access and the same format, as such national securities exchange or national securities association makes available any information with respect to quotations for and transactions in NMS stocks to any person.

(3) Every national securities exchange on which an NMS stock is traded and national securities association shall act jointly pursuant to one or more effective national market system plans to disseminate consolidated information, including a national best bid and national best offer and odd-lot information, on quotations for and transactions in NMS stocks. Such plan or plans shall provide for the dissemination of all consolidated information for an individual NMS stock through a single plan processor and such single plan processor must represent quotation sizes in such consolidated information in terms of the number of shares, rounded down to the nearest multiple of a round lot. Every national securities exchange on which an NMS stock is traded and national securities association shall make available to a plan processor all data necessary to generate odd-lot information.

* * * * *

■ 4. Amend § 242.610 by:

■ a. Revising paragraph (c);

■ b. Redesignating paragraphs (d) and (e) as paragraphs (e) and (f); and

■ c. Adding new paragraph (d).

The revisions and addition read as follows:

§ 242.610 Access to quotations.

* * * * *

(c) *Fees for access to quotations.* A trading center shall not impose, nor permit to be imposed, any fee or fees for the execution of an order against a protected quotation of the trading center or against any other quotation of the trading center that is the best bid or best offer of a national securities exchange or the best bid or best offer of a national securities association in an NMS stock that exceed or accumulate to more than the following limits:

(1) If the price of a protected quotation or other quotation is \$1.00 or more, the fee or fees cannot exceed or accumulate to more than \$0.001 per share; or

(2) If the price of a protected quotation or other quotation is less than \$1.00, the fee or fees cannot exceed or accumulate to more than 0.1% of the quotation price per share.

(d) *Transparency of fees.* A national securities exchange shall not impose, nor permit to be imposed, any fee or fees, or provide, or permit to be provided, any rebate or other remuneration, for the execution of an order in an NMS stock that cannot be determined at the time of execution.

* * * * *

■ 5. Revise § 242.612 to read as follows:

§ 242.612 Minimum pricing increment.

(a) *Definitions.* For purposes of this section only, the following terms shall have the meanings set forth in this section.

(1) *Evaluation Period* means:

(i) The three months from January through March of a calendar year; and

(ii) The three months from July through September of a calendar year during which the Time Weighted Average Quoted Spread of an NMS stock shall be measured by the primary listing exchange to determine the minimum pricing increment for each NMS stock.

(2) *Time Weighted Average Quoted Spread* means the average dollar value difference between the NBB and NBO during regular trading hours where each instance of a unique NBB and NBO is weighted by the length of time that the quote prevailed as the NBB or NBO.

(b) *Minimum pricing increments.* (1) The minimum pricing increment under paragraph (b)(2) of this section shall be operative on:

(i) The first business day of May for the Evaluation Period from January through March and continue through the last business day of October of the calendar year; and

(ii) The first business day of November for the Evaluation Period from July through September and continue through the last business day of April of the next calendar year.

(2) No national securities exchange, national securities association, alternative trading system, vendor, or broker or dealer shall display, rank, or accept from any person a bid or offer, an order, or an indication of interest in any NMS stock in an increment smaller than required pursuant to either paragraph (b)(2)(i) or (ii) of this section if that bid or offer, order, or indication of interest is priced equal to or greater than \$1.00 per share:

(i) \$0.01, if the Time Weighted Average Quoted Spread for the NMS stock during the Evaluation Period was greater than, \$0.015; or

(ii) \$0.005, if the Time Weighted Average Quoted Spread for the NMS

stock during the Evaluation Period was equal to or less than \$0.015.

(3) No national securities exchange, national securities association, alternative trading system, vendor, or broker or dealer shall display, rank, or accept from any person a bid or offer, an order, or an indication of interest in any NMS stock priced in an increment smaller than \$0.0001 if that bid or offer, order, or indication of interest is priced less than \$1.00 per share.

(c) *New NMS Stocks.* Any security that becomes an NMS Stock during an operative period as described in paragraph (b)(1) of this section shall be assigned a minimum pricing increment of \$0.01 for bids or offers, orders, or indications of interest priced equal to or greater than \$1.00 per share.

(d) *Exemptions.* The Commission, by order, may exempt from the provisions of this section, either unconditionally or on specified terms and conditions, any person, security, quotation, or order, or any class or classes of persons, securities, quotations, or orders, if the Commission determines that such exemption is necessary or appropriate in the public interest, and is consistent with the protection of investors.

By the Commission.

Dated: September 18, 2024.

Vanessa A. Countryman,
Secretary.

[FR Doc. 2024-21867 Filed 10-7-24; 8:45 am]

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Part III

Environmental Protection Agency

40 CFR Part 372

Addition of Certain Per- and Polyfluoroalkyl Substances (PFAS) to the
Toxics Release Inventory (TRI); Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 372

[EPA-HQ-OPPT-2023-0538; FRL-9313-01-OCSPP]

RIN 2070-AL03

Addition of Certain Per- and Polyfluoroalkyl Substances (PFAS) to the Toxics Release Inventory (TRI)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to add 16 individually listed per- and polyfluoroalkyl substances (PFAS) and 15 PFAS categories to the Toxics Release Inventory (TRI) list of toxic chemicals subject to reporting under the Emergency Planning and Community Right-to-Know Act (EPCRA) and the Pollution Prevention Act (PPA) to comply with the National Defense Authorization Act for Fiscal Year 2020 (NDAA). EPA also addresses how PFAS categories should be treated. Separately, EPA discusses what events may trigger the automatic addition of a PFAS to the TRI pursuant to the NDAA. This discussion does not propose to list chemicals to TRI pursuant to the NDAA, but rather describes what EPA documents and activities involving PFAS would trigger an automatic addition under the NDAA.

DATES: Comments must be received on or before December 9, 2024. Comments on the information collection provisions submitted to the Office of Management and Budget (OMB) under the Paperwork Reduction Act (PRA) are best assured of consideration by OMB if OMB receives a copy of your comments on or before November 7, 2024.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA-HQ-OPPT-2023-0538, through <https://www.regulations.gov>. Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at <https://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT: For technical information contact: Rachel Dean, Data Gathering, Analysis, Management, and Policy Division, Mailcode 7406M, Office of Pollution

Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460-0001; telephone number: (202) 566-1303; email address: dean.rachel@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Executive Summary

A. Does this action apply to me?

You may be potentially affected by this action if you manufacture, process, or otherwise use any of the PFAS listed in this rule. The following list of North American Industry Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Facilities included in the following NAICS manufacturing codes (corresponding to Standard Industrial Classification (SIC) codes 20 through 39): 311*, 312*, 313*, 314*, 315*, 316, 321, 322, 323*, 324, 325*, 326*, 327*, 331, 332, 333, 334*, 335*, 336, 337*, 339*, 111998*, 211130*, 212323*, 212390*, 488390*, 5131*, 512230*, 512250*, 516210*, 519290*, 541713*, 541715* or 811490*. * Exceptions and/or limitations exist for these NAICS codes.

- Facilities included in the following NAICS codes (corresponding to SIC codes other than SIC codes 20 through 39): 212114, 212115, or 212220, 212230, 212290*; or 2211*, 221210*, 221330 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce) (corresponds to SIC codes 4911, 4931, and 4939, Electric Utilities); or 424690, 424710 (corresponds to SIC code 5171, Petroleum Bulk Terminals and Plants); 425120 (limited to facilities previously classified in SIC code 5169, Chemicals and Allied Products, Not Elsewhere Classified); or 562112 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis (previously classified under SIC code 7389, Business Services, NEC)); or 562211*, 562212*, 562213*, 562219*, 562920* (limited to facilities regulated under the Resource Conservation and Recovery Act, subtitle C, 42 U.S.C. 6921 *et seq.*) (corresponds to SIC code 4953, Refuse Systems).

- Federal facilities.
- Facilities that the EPA Administrator has specifically required to report to TRI pursuant to a determination under EPCRA section 313(b)(2).

A more detailed description of the types of facilities covered by the NAICS codes subject to reporting under EPCRA

section 313 can be found at <https://www.epa.gov/toxics-release-inventory-tri-program/tri-covered-industry-sectors>. To determine whether your facility is affected by this action, you should carefully examine the applicability criteria in 40 CFR part 372, subpart B. Federal facilities are required to report under Section 6(a) and (b) of Executive Order 14096 (88 FR 25251, April 21, 2023), titled “Revitalizing Our Nation’s Commitment to Environmental Justice for All.” If you have questions regarding the applicability of this action to a particular entity, consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

B. What action is the Agency taking?

EPA is proposing to add 16 individually listed per- and polyfluoroalkyl substances (PFAS) and 15 PFAS categories to the TRI list of toxic chemicals subject to reporting under section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and section 6607 of the Pollution Prevention Act (PPA). The proposed PFAS chemical categories are comprised of an acid, associated salts, associated acyl/sulfonyl halides, and an anhydride. EPA is proposing to set a manufacturing, processing, and otherwise use reporting threshold of 100 pounds for each individually listed PFAS and PFAS category being proposed for listing by this rulemaking and to designate all PFAS listed under this action as chemicals of special concern. EPA also proposes to reclassify some individually-listed PFAS previously added to the TRI by sections 7321(b) and (c) of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) as part of the proposed PFAS chemical categories. Doing so would align such listings with the approach provided for the candidate additions proposed in this rulemaking. This would change these chemicals from being individually listed to being part of the applicable chemical category. Finally, EPA also addresses what events may trigger the automatic addition of PFAS to the TRI list pursuant to the framework established by the NDAA section 7321(c).

C. What is the Agency’s authority for taking this action?

EPA is taking this action pursuant to EPCRA sections 313(d) and 328 (42 U.S.C. 11023(d) and 11048), and section 7321(d) of the FY2020 NDAA (Pub. L. 116–92, section 7321). EPCRA is also referred to as Title III of the Superfund Amendments and Reauthorization Act of 1986. EPCRA section 313 is also

referred to as the Toxics Release Inventory (TRI).

1. EPCRA Authorities

EPCRA section 313 requires owners/operators of certain facilities that manufacture, process, or otherwise use listed toxic chemicals in amounts above reporting threshold levels to report their facilities' environmental releases and other waste management information on such chemicals annually. These facility owners/operators must also report pollution prevention and recycling data for such chemicals, pursuant to section 6607 of the PPA (42 U.S.C. 13106).

Under EPCRA section 313(c), Congress established an initial list of toxic chemicals subject to EPCRA toxic chemical reporting requirements that was comprised of 308 individually listed chemicals and 20 chemical categories. EPCRA section 313(d) authorizes EPA to add or delete chemicals from the list and sets criteria for these actions. EPCRA section 313(d)(2) states that EPA may add a chemical to the list if any of the listing criteria in EPCRA section 313(d)(2) are met. Therefore, to add a chemical, EPA must determine that at least one criterion is met, but need not determine whether any other criterion is met. Conversely, to remove a chemical from the list, EPCRA section 313(d)(3) dictates that EPA must determine that none of the criteria in EPCRA section 313(d)(2) are met. The listing criteria in EPCRA section 313(d)(2)(A) through (C) are as follows:

- The chemical is known to cause or can reasonably be anticipated to cause significant adverse acute human health effects at concentration levels that are reasonably likely to exist beyond facility site boundaries as a result of continuous, or frequently recurring, releases.
- The chemical is known to cause or can reasonably be anticipated to cause in humans: cancer or teratogenic effects, or serious or irreversible reproductive dysfunctions, neurological disorders, heritable genetic mutations, or other chronic health effects.
- The chemical is known to cause or can be reasonably anticipated to cause, because of its toxicity, its toxicity and persistence in the environment, or its toxicity and tendency to bioaccumulate in the environment, a significant adverse effect on the environment of sufficient seriousness, in the judgment of the Administrator, to warrant reporting under this section.

EPA often refers to the EPCRA section 313(d)(2)(A) criterion as the "acute human health effects criterion;" the EPCRA section 313(d)(2)(B) criterion as

the "chronic human health effects criterion;" and the EPCRA section 313(d)(2)(C) criterion as the "environmental effects criterion." EPA published a statement in the **Federal Register** of November 30, 1994 (59 FR 61432) (FRL-4922-2)) clarifying its interpretation of the EPCRA section 313(d)(2) and (d)(3) criteria for modifying the EPCRA section 313 list of toxic chemicals.

2. FY 2020 NDAA Authorities

The FY 2020 NDAA provides several avenues for PFAS to be added to the TRI. Section 7321(b) of the FY 2020 NDAA, entitled "Immediate Inclusion," provides that specific PFAS shall be deemed included in the TRI beginning January 1 of the calendar year following the date of enactment of the NDAA. Section 7321(c) of the FY 2020 NDAA, titled "Inclusion following Assessment," provides that PFAS shall be added to the TRI beginning January 1 of the year after the date on which certain events occur including the date on which the Administrator finalizes a toxicity value for a PFAS. These events include the following: EPA finalizing a toxicity value for a PFAS; including a PFAS in a Significant New Use Rule (SNUR) issued under the Toxic Substances Control Act (TSCA) (15 U.S.C. 2601 *et seq.*) or addition to an existing SNUR; and designating a PFAS as active on the TSCA Chemical Substance Inventory (TSCA Inventory). Section 7321(d) of the FY 2020 NDAA, in turn, requires EPA to determine within two years of the date of enactment of the FY 2020 NDAA whether certain PFAS (including classes) meet any of the listing criteria of EPCRA section 313(d)(2). As stated in Section 7321(d)(2) of the FY 2020 NDAA, the PFAS for which EPA must make such determinations include 15 PFAS described by name, each PFAS or class of PFAS for which a method to measure levels in drinking water has been validated by the Administrator, and each PFAS or class of PFAS that is used to manufacture fluorinated polymers, as determined by the Administrator. Section 7321(d)(3) of the FY 2020 NDAA requires that those PFAS that EPA determines meet the EPCRA section 313(d)(2) listing criteria be added to the EPCRA section 313 toxic chemical list within two years of such determination.

D. What are the estimated incremental impacts of this action?

EPA prepared an economic analysis for this action titled, "Economic Analysis for the Addition of Certain Per- and Polyfluoroalkyl Substances;

Community Right-to-Know Toxic Chemical Release Reporting; Proposed Rule (RIN 2070-AL03)" (Ref. 1), which presents an analysis of the costs of the proposed addition of 16 individually listed PFAS and 15 categories of PFAS identified in this document to the TRI list of chemicals. This economic analysis is available in the docket and is summarized here.

EPA estimates that this action would result in an additional 356 to 1,110 TRI reporting forms (*i.e.*, Form Rs) being filed annually. EPA estimates that the costs of this action will be approximately between \$2,114,886 and \$6,594,234 in the first year of reporting and approximately \$1,007,093 and \$3,140,123 in the subsequent years. In addition, EPA has determined that, of the 277 to 865 small businesses affected by this action, none are estimated to incur annualized cost impacts of more than 1% of revenues. Thus, this action is not expected to have a significant adverse economic impact on a substantial number of small entities as further discussed in Unit X.C.

E. What should I consider as I prepare my comments for EPA?

1. Submitting CBI

Do not submit CBI to EPA through <https://www.regulations.gov> or email. If you wish to include CBI in your comment, please follow the applicable instructions at <https://www.epa.gov/dockets/commenting-epa-dockets#rules> and clearly mark the part or all of the information that you claim to be CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2 and/or 40 CFR part 703, as applicable.

2. Tips for Preparing Your Comments

When preparing and submitting your comments, see the commenting tips at <https://www.epa.gov/dockets/commenting-epa-dockets>.

II. Background

A. What are "PFAS"?

PFAS are synthetic organic compounds that do not occur naturally in the environment. PFAS typically contain a linear or branched alkyl carbon chain on which the hydrogen atoms have been partially (*i.e.*, polyfluorinated) or completely (*i.e.*, perfluorinated) replaced by fluorine atoms. In general, the strong carbon-

fluorine bonds of PFAS make them resistant to degradation and thus highly persistent in the environment (Ref. 2, 3, 4); though, some PFAS (e.g., certain perfluorobutanesulfonyl fluoride and perfluorobutanesulfonic anhydride in the case of perfluorobutanesulfonic acid (PFBS)), are known to become more toxic as they degrade in the environment. Some of these chemicals have been used for decades in a wide variety of consumer and industrial products (Ref. 2, 3, 4). Some PFAS have been detected in humans and wildlife indicating that at least some PFAS have the ability to bioaccumulate (Ref. 2, 4). Because of the widespread use of PFAS in commerce and their tendency to persist in the environment, most people in the United States have been exposed to PFAS (Ref. 3, 5, 6). PFAS can accumulate in humans and remain in the human body for long periods of time (e.g., months to years) (Ref. 3, 4); several PFAS have been detected in human blood serum (Ref. 3, 4, 5, 6).

Section 7321 of the NDAA does not define “PFAS.” Elsewhere in the NDAA, PFAS are defined for purposes specific to the applicable section. For example, in section 332, PFAS are defined as “man-made chemicals with at least one fully fluorinated carbon atom.” Beyond the NDAA, various scientific bodies and regulatory agencies—such as the European Chemical Agency (ECHA) and the Swedish Chemicals Agency—are aligned with the Organization of Economic Co-operation and Development (OECD) (Ref. 7, 8) in defining PFAS using broad, inclusive definitions.

Because the FY2020 NDAA does not provide a complete list of the PFAS that EPA must consider for inclusion in the TRI, EPA used a structural definition of PFAS being used for other chemical regulatory activities at EPA (e.g., TSCA section 8(a)(7) Reporting and Recordkeeping Requirements for Perfluoroalkyl and Polyfluoroalkyl Substances final rule (hereafter, the “TSCA PFAS Data Reporting Rule”) (88 FR 70516) (Ref. 2) for the purpose of scoping chemicals for this proposed rule. Thus, for purposes of identifying candidates for this proposed TRI listing of PFAS, PFAS is defined to include chemicals that contain at least one of these three structural moieties:

R-(CF₂)-CF(R')R”, where both the CF₂ and CF moieties are saturated;
 R-CF₂OCF₂-R', where R and R' can either be F, O, or saturated carbons; or
 CF₃C(CF₃)R'R”, where R' and R” can either be F or saturated carbons.

EPA notes that this definition may not be identical to other definitions of PFAS used within EPA and/or by other organizations. The term “PFAS” has been used broadly by many organizations for their individual research and/or regulatory needs. As an example, the definition that EPA applied for this proposal is a more precise characterization than the very broad and inclusive definitions provided in other sections of the NDAA (described above). Various programs or organizations have distinct needs or purposes apart from EPA's Office of Chemical Safety and Pollution Prevention (OCSPP). Therefore, different definitions of the term “PFAS” may be appropriate for other purposes—some are meant to describe the broader universe of PFAS as a whole and others are intended to be regulatorily- and context-specific. The Agency notes that this perspective, that different users may have different decision contexts or needs and no single PFAS characterization or definition meets all needs, is shared by many other organizations, including OECD (see page 29, (Ref. 7)).

EPA recognizes that there were various options for applying a definition of “PFAS” for scoping purposes and acknowledges that there may be other rules or programs that apply different definitions to meet their own needs. Notably, use of the definition described in this unit aligns this proposal with other regulatory actions by OCSPP, such as the TSCA PFAS Data Reporting Rule (Ref. 2), thereby providing a consistent understanding across TSCA and TRI for purposes of assessing hazard information. Further, aligning the TRI definition with the definition being used for various TSCA activities helps ensure that this TRI rulemaking focuses on chemicals most likely to be active in commerce and thus are more likely to be manufactured, processed, and/or otherwise used by facilities in quantities that may trigger TRI reporting requirements. As indicated previously, the TSCA PFAS Data Reporting Rule provides additional discussion of this definition and the explanation for its use for certain regulatory actions (Ref. 2).

B. How did EPA identify PFAS for purposes of identifying PFAS to be added under 7321(d) of the NDAA?

The first step EPA took in identifying PFAS as required by section 7321(d) of the NDAA was to create a list of all potential chemical candidates to consider. Section 7321(d)(2)(A) through (O) provides a list of PFAS for which the Administrator must determine

whether any of the EPCRA 313(d)(2) criteria are met. Paragraphs (A) through (M) of section 7321(d)(2) identify specific PFAS by name and/or an identifier (typically Chemical Abstracts Service Registry Number (CASRN)). Paragraph (N) identifies any PFAS for which a method to measure levels in drinking water has been validated by the Administrator. At the time of the NDAA's enactment, EPA had approved two methods to analyze drinking water samples to ensure compliance with regulations that include PFAS, Method 533 and 537.1. Together, Method 533 and Method 537.1 identify 29 PFAS, of which 23 are distinct from the PFAS identified in paragraphs (A) through (M).

Paragraph (O) generally indicates that EPA must consider for listing any PFAS used to manufacture fluorinated polymers, as determined by the Administrator. A polymer is a chemical substance consisting of molecules characterized by the sequence of one or more types of monomer units. A monomer is a chemical substance that is capable of forming covalent bonds with two or more like or unlike molecules. A monomer reacting with other monomer molecules forms a larger polymer chain or network in a process called polymerization. Accordingly, a fluorinated polymer is a polymer that includes fluorine.

To determine which PFAS qualify as PFAS used to manufacture fluorinated polymers pursuant to paragraph (O), EPA relied on the CompTox Chemicals Dashboard (CompTox) (an EPA web-based application that provides public access to data on more than 1.2 million chemicals) (comptox.epa.gov/dashboard) (Ref. 9). CompTox includes a broad list of PFAS chemicals (see the Dashboard chemical list “EPA PFAS chemicals without explicit structures,” available at <https://comptox.epa.gov/dashboard/chemical-lists/PFASDEV1>) (Ref. 10), which includes fluorinated polymers. EPA downloaded this list and then, to identify polymers, filtered out likely non-polymers by first removing any chemicals listed as “compounds with,” “reaction products,” or “poly(difluoromethane)-R”. Such substances would not be characterized as “fluorinated polymers.” The remaining chemicals were identified as potential fluorinated polymers as per the language provided by paragraph (O).

Then, of the remaining potential fluorinated polymers, EPA determined whether a PFAS was used to manufacture the polymer. EPA reviewed the preferred name or other associated synonym that provided descriptive information of the molecular structure

of the polymer or information about the chemicals used to create the respective polymer. These descriptive synonyms were used to identify fluorinated substructures of the polymer and/or each fluorinated substance used to make the polymer (*i.e.*, EPA identified each component of a polymer that is a fluorinated chemical based on its name). For example, for the polymer in CompTox labeled “POLYFLGSID_897590” (CASRN 68586–13–0), its constituent monomers were not apparent from that name. However, its synonym as registered within CompTox was “2-Propenoic acid, 2-[[heptadecafluorooctyl]sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl]nonafluorobutyl]sulfonyl]amino]ethyl 2-propenoate, α -(2-methyl-1-oxo-2-propenyl)- ω -hydroxypoly(oxy-1,2-ethanediyl), α -(2-methyl-1-oxo-2-propenyl)- ω -[[2-methyl-1-oxo-2-propenyl]oxy]poly(oxy-1,2-ethanediyl), 2-[methyl]pentadecafluoroheptyl]sulfonyl]amino]ethyl 2-propenoate, 2-[methyl]tridecafluorohexyl]sulfonyl]amino]ethyl 2-propenoate and 2-[methyl]undecafluoropentyl]sulfonyl]amino]ethyl 2-propenoate,” which allowed EPA to identify five constituent monomers and determine whether any met the definition of PFAS used for purposes of scoping for this rule. EPA then identified as many unique CASRNs for these individual monomers as possible and compared them to the PFAS already on the TRI list as well as those already under review or subject to review via another requirement of the NDAA (*e.g.*, any PFAS for which a method to measure levels in drinking water has been validated by the Administrator that are already on the TRI list, NDAA section 7231(d)(2)(N)). Additionally, EPA removed any chemicals identified via this process that did not meet the TSCA PFAS Data Reporting Rule’s structural definition of PFAS (Ref. 2) (see Unit II.A.).

NDAA section 7321(d)(2) uses the term “including” as a preface to the PFAS described by paragraphs (A) through (O). EPA thus interprets paragraphs (A) through (O) as examples of the larger universe of PFAS this section requires EPA to consider. Accordingly, EPA also considered additional PFAS beyond those described by paragraphs (A) through (O). To assist in identifying such chemicals, EPA applied the definition of PFAS (see Unit II.A.) and looked for chemicals that fit that definition. Additionally, EPA considered its

previously articulated position on the use of manufacturing volume thresholds (*e.g.*, 58 FR 63500, December 1, 1993) (FRL–4904–6)) and, as in past chemical reviews (*e.g.*, 59 FR 61432, November 30, 1994) (FRL–4922–2) (Ref. 11), applied a screening process to screen out PFAS for which no reports would be expected to be submitted in order to focus its listing actions on chemicals for which TRI reporting is anticipated. TRI previously used Chemical Data Reporting (CDR) data to help identify chemicals for which TRI reporting would be unlikely due to no reports having been submitted to CDR for any such chemicals. However, because the CDR reporting threshold (either 25,000 pounds or 2,500 pounds, depending on whether certain TSCA actions apply to the given chemical substance) is above the 100-pound threshold being proposed here, EPA determined it more appropriate to consider a broader universe of chemicals than just those identifiable using the CDR production volume screen.

To assist EPA in identifying PFAS for which TRI reporting could be anticipated, the Agency considered PFAS categorized as reportable pursuant to the TSCA PFAS Data Reporting Rule (Ref. 2), given that rule’s focus on manufactured PFAS. (For more discussion on the proposed reporting threshold for this action, see Unit V.). PFAS reportable pursuant to the TSCA PFAS Data Reporting Rule are primarily characterized as “active” in commerce pursuant to the TSCA Inventory, though the TSCA PFAS Data Reporting Rule, includes chemical substances beyond those on the TSCA Inventory (*e.g.*, PFAS with a low-volume exemption). TRI reporting on such chemicals could occur since they may be manufactured, processed, and/or otherwise used. Thus, it is appropriate to include such chemicals for consideration for purposes of this rule. Additionally, EPA considered chemicals that might not be subject to the TSCA PFAS Data Reporting Rule, but which might nevertheless be possible listing candidates for TRI (*e.g.*, PFAS regulated pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act).

EPA did not screen out (*i.e.*, remove as a candidate) any PFAS listed in NDAA section 7321(d)(2)(A) through (O) based on TSCA Inventory status. EPA did, however, remove any chemicals with CBI claims related to their identity to focus on chemicals for which the Agency could publicly provide hazard data to support listing. EPCRA section 313(d)(2) requires EPA to support proposed listings with “sufficient evidence.” Consequently, it could be

difficult for the public to review and comment on such evidence where the public is not aware of the identity of the chemical. Further, it would take additional Agency resources to ensure that such information is provided in a manner that protects the privileged information pursuant to the applicable CBI claim. However, current CBI claims concerning identity of a given PFAS are being reviewed by EPA. Further, additional reviews will be triggered by forthcoming CDR filings as well as reporting being required pursuant to the TSCA section 8(a)(7) PFAS Data Reporting Rule. EPA will consider PFAS whose identities are disclosed due to this review process as candidates for potential future additions.

For chemicals other than the NDAA section 7321(d)(2)(A) through (O) candidates and except for purposes of identifying salts associated with acids being proposed for listing, EPA generally removed from consideration PFAS which were not active on the TSCA Inventory. The Agency also removed chemicals with CBI claims related to their identity, when locating hazard information. By excluding chemicals with CBI claims related to their identity for purposes of identifying hazard information, EPA focused on publicly available literature with which to support the TRI listing process. Please see Unit IV. for details on CBI claims related to potential category chemicals.

Though EPA generally used the TSCA Inventory as a means to screen out chemicals, aside from the specifically mentioned chemicals in the NDAA, the Agency also considered certain chemicals that are not on the TSCA Inventory (those that are regulated under statutes other than TSCA due to their uses). For example, TSCA does not regulate uses of a chemical as a pesticide or drug. EPCRA does not limit the scope of reportable chemical substances by use of the chemical. Thus, EPA determined it appropriate not to apply the TSCA Inventory screening process where EPA is aware of the manufacture of a chemical even though it is not on the TSCA Inventory. For such chemicals, the Agency considered available toxicity data to determine if there is sufficient evidence to support a TRI listing. Accordingly, EPA is including certain pesticides registered with the EPA (*i.e.*, broflanilide, hexaflumuron, pyrifluquinazon, and tetraconazole) as well as certain pharmaceutical chemicals for which the Agency anticipates TRI reporting would occur were the Agency to list such chemicals. Relatedly, EPA is also proposing to clarify that pesticide

registrations that establish final toxicity values for PFAS constitute finalization of a toxicity value by the Administrator that result in the automatic addition of the PFAS to the TRI (see Unit VII.). This approach captured a large universe of PFAS for which EPA screened for literature that could support a TRI listing pursuant to the ECPRA section 313(d)(2) criteria. For PFAS for which such literature was located, the Agency produced either TRI listing support documents, as provided in the docket, or relied on assessments that had been or are being produced for reasons separate from this rulemaking.

Additionally, EPA explored additional means for identifying PFAS, as well as other chemicals, as candidates for TRI listing, and the Agency is soliciting comment on this approach as well as other approaches that it might take to expand its process for identifying and proposing chemicals for addition to the TRI list. To this end, the TRI Program queried the ECOTOX Knowledgebase (ECOTOX) (Ref. 12) and the EPA Health Assessment Workspace Collaborative (EPA HAWC) project for the Systematic Evidence Map for Over One Hundred and Fifty Per- and Polyfluoroalkyl Substances (PFAS) publication (PFAS 150 (2022) project for shorthand) (Ref. 13, 14).

ECOTOX is a web-based application for locating single chemical toxicity data for aquatic life, terrestrial plants, and wildlife. EPA created and maintains ECOTOX to address the need for assembled environmental toxicity data as the number of chemicals introduced into commerce continues to grow and regulatory mandates require safety assessments for a greater number of chemicals. ECOTOX is currently the world's largest compilation of curated ecotoxicity data, providing support for assessments of chemical safety and ecological research through systematic and transparent literature review procedures. ECOTOX utilizes well-established standard operating procedures with a strict screening pipeline and process to only include applicable data from several well-recognized databases (e.g. Scopus, ProQuest, PubAg, Web of Science).

Comprehensive chemical-based literature searches are conducted by experts in the field and the resulting citations are screened at title/abstract level followed by manual full-text review. If a study passes pipeline screening at the title/abstract level, the full text is then manually reviewed to determine applicability for inclusion to ECOTOX and can be excluded for a number of reasons (Ref. 15). Inclusion criteria include: exposure to a single

chemical (test substance) that can be unequivocally identified, test organism unequivocally identified and relevant for ecological assessments, reported exposure concentration(s) and duration, and inclusion of control(s). Exclusion reasons are, for example: lack of an appropriate description of study methods to determine test substance, test organism, exposure duration/concentration; species relevant for human health hazard (rather than ecological hazard); or observational survey study; among other reasons (Ref. 15). Furthermore, many data fields are extracted for each study in ECOTOX that can serve as a metric for evaluation of study design, including: test method; dose; exposure sample number and duration; analytical methods and measurements; and experimental design. In addition to identification of studies through ECOTOX-specific literature searches, studies that EPA has reviewed with its systematic review process are also added to ECOTOX (*i.e.*, for TSCA Risk Evaluations).

EPA HAWC is a web-based application for developing environmental and human health assessments that promotes transparency, data usability, and understanding of the data and decisions supporting an assessment. EPA HAWC allows the data and decisions supporting an assessment to be evaluated and managed using a collection of features that support methods including literature screening, study evaluation, and data extraction. EPA HAWC serves as a comprehensive landscape of study details and data supporting an assessment, and it serves as a public repository for the study quality decisions and extracted data used to support an assessment and provides rich, interactive visuals of the results both within and across the evidence (<https://www.epa.gov/risk/health-assessment-workspace-collaborative-hawc>). For EPA assessments that have used the EPA HAWC application to aid in support conducting those assessments, which include certain TSCA risk evaluations and IRIS and other ORD assessments, the system contains information on the collective, publicly available studies and data that were used in those assessments (<https://hawc.epa.gov/assessment/public/>).

Both ECOTOX and EPA HAWC are web-based applications that provide study quality evaluation and dose-response analysis, among other information, that can be analyzed as evidence for purposes of TRI chemical listing decisions. EPA HAWC differs from ECOTOX in that ECOTOX is a comprehensive Knowledgebase

providing single chemical environmental toxicity data on aquatic and terrestrial species whereas EPA HAWC is an interactive, expert-driven, content management system for human health assessments. The Agency has identified one chemical ((1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) (CASRN 27619-97-2)) from a project within EPA HAWC, supporting data for the Systematic Evidence Map for Over One Hundred and Fifty Per- and Polyfluoroalkyl Substances (PFAS) (PFAS 150 (2022) project) (Ref. 14), that it determined would meet the TRI listing criteria. The Agency also identified one chemical (fulvestrant (CASRN 129453-61-8)) from ECOTOX that it determined would meet the TRI listing criteria. Because the content from each of these applications is produced by a consistent, published methodology based on generally accepted scientific principles, the Agency considers these applications to be appropriate tools for establishing sufficient evidence to support TRI listings analysis arising from information provided by these applications. More information is provided in Unit III. on the specific chemicals being proposed for listing, and EPA is, in Unit VIII., soliciting comment on using either or both of these applications, as well as other sources of such data, to support TRI listing decisions.

The Agency is unaware of evidence on PFAS beyond the chemicals identified in this proposal that provide data sufficient for a TRI listing. EPA solicits comment on PFAS that the Agency might have overlooked where existing hazard literature would support a finding required by EPCRA section 313(d)(2) for a TRI chemical listing. In submitting literature for EPA's consideration, please refer to previous TRI chemical listing rule discussions for further guidance on how the Agency evaluates evidence in determining whether a study or data is sufficient for TRI listing, and whether the sufficient data support an EPCRA section 313 listing; see the Addition of 12 Chemicals final rule (87 FR 73475; November 30, 2022 (FRL-5927-02-OCSP)) (Ref. 16) and the 1994 chemical list expansion final rule (59 FR 61432; November 30, 1994 (FRL-4922-2)) (Ref. 11).

The Agency also searched for salts, acyl/sulfonyl halides, and anhydrides associated with PFAS identified for addition (as these are known hydrolysis precursors to the PFAS acid), as well as for PFAS added to TRI pursuant to previous activities (*i.e.*, listed due to NDAA section 7321(b) and (c)). Salts, acyl/sulfonyl halides, and the anhydride associated with a given PFAS acid are

expected to have similar or higher toxicity (where the base comprising the salt [counter ion] presents an additional toxicity concern) to the associated acid. For purposes of describing these categories, EPA is proposing to list identified salts, acyl/sulfonyl halides, and the anhydride associated with each PFAS category. However, listing such chemicals is meant to be an illustrative rather than exhaustive list. Put another way, these proposed PFAS categories would include all of the salts, acyl/sulfonyl halides, and anhydride of the given PFAS acid rather than just those listed as examples (*i.e.*, as proposed, the listing of an acid as a TRI category will automatically include associated salts, acyl/sulfonyl halides, and the anhydride, even if not explicitly mentioned).

Any chemicals that were statutorily added to the TRI list pursuant to NDAA sections 7321(b) or (c), or already on the TRI list prior to the NDAA, are not candidates for this rulemaking due to their already being on the TRI list. However, EPA is proposing to change some such individual listings to category listings described in Unit III.B.

Lastly, for some of the chemicals expressly described by 7321(d)(2)(A) through (N), EPA's literature review did not reveal information sufficient to support a proposed listing. Accordingly, the Agency is not proposing to add such chemicals to the TRI list and as such, is not providing listing support documents to support TRI listings of any such chemicals. As indicated above, EPA is soliciting information related to chemicals in this proposal (for chemicals proposed for listing as well as for chemicals not identified as listing candidates). See Unit IV.A. for a list of these chemicals.

C. What is EPA's general rationale for proposing to list these PFAS pursuant to section 7321 of the NDAA?

Based on EPA's review of the publicly available toxicity data, EPA has concluded that the PFAS proposed for addition to the EPCRA section 313 toxic chemical list can reasonably be anticipated to cause adverse chronic human health effects at moderately low to low exposure doses and/or environmental effects at low concentrations. EPA concludes the data show that these PFAS have moderately high to high human health toxicity and/or are highly toxic to aquatic organisms. Further, some of the PFAS (*e.g.*, certain perfluorobutanesulfonyl fluoride and perfluorobutanesulfonyl anhydride in the case of perfluorobutanesulfonic acid (PFBS)) being proposed for listing are known to become more toxic as they

degrade in the environment to other PFAS included in this proposed rule; in other words, some of the PFAS proposed for listing are known to be the source of transformation/degradation products that are highly toxic. Therefore, EPA believes that the evidence is sufficient for listing all PFAS in this proposed rule (as described in Unit III.B. and C.) on the EPCRA section 313 toxic chemicals list pursuant to EPCRA section 313(d)(2)(B) and/or (C).

EPA has generally determined that it is not necessary or appropriate to perform an exposure assessment in order to consider listing TRI chemicals. EPA has considered the carcinogenicity and the potential for other serious or irreversible chronic human health effects as part of evaluating whether to list, but the Agency has not performed an exposure assessment pursuant to EPCRA section 313(d)(2)(B) (see 59 FR 61440–61442). EPCRA section 313 specifically requires that exposure be considered for listing a chemical pursuant to section 313(d)(2)(A). The statute mandates that EPA consider whether “a chemical is known to cause or can reasonably be anticipated to cause significant adverse acute human health effects at concentration levels that are reasonably likely to exist beyond facility site boundaries.” However, statute is silent on the issue of exposure considerations for the section 313(d)(2)(B) and (C) criteria. The language of section 313 does not prohibit EPA from considering exposure factors when making a finding under either section 313(d)(2)(B) or section 313(d)(2)(C), though such considerations are not required.

Accordingly, generally EPA does not consider exposure for chronic human health effects or environmental effects as doing so is not statutorily required pursuant to EPCRA section 313(d)(2)(C) (see 59 FR 61440–61442).

Not only does EPCRA not require EPA to perform an exposure assessment for listings pursuant to section 313(d)(2)(B) or (C), but the intent of EPCRA also warrants forgoing exposure assessments for TRI listings. EPCRA section 313 charges EPA with collecting and disseminating information on releases, among other waste management data, so that communities can estimate local exposure and local risks; risks which can be significantly different than those which would be assessed using generic exposure considerations. The intent of EPCRA section 313 is to ensure that communities in which the releases occur have information needed both to consider the significance of risks and potential ways to address them.

Similarly, TRI data helps the federal government, states, tribes, and local governments determine appropriate actions with regard to potential risks. This basic empowerment at national and local levels is a cornerstone of the right-to-know program.

Therefore, in accordance with EPA's standard policy on the use of exposure assessments (see November 30, 1994 (59 FR 61432, FRL–4922–2) (Ref. 11)), an exposure assessment is neither necessary nor appropriate for determining whether any of the PFAS in this proposed rule meet the criteria of EPCRA section 313(d)(2)(B) or (C).

EPA is also proposing to list certain categories of PFAS to include an acid and associated salts and acyl/sulfonyl halides. EPA's position is that salts will have at least the same hazard concerns as the associated acid. Categorizing salts with their associated acids will reduce the overall number of individual chemical listings while helping to ensure that TRI reporting is informative as it relates to the hazard for a given acid being proposed for listing. Further, the NDAA directs EPA to determine “whether the substances and classes of substances” described by section 7321(d) meet the TRI-listing criteria, which indicates congressional support for TRI to establish categories to help facilitate such reporting. Further, whereas ions were previously included on the TRI list pursuant to the NDAA section 7321(c), EPA is proposing to remove any individually-listed CASRNs of ions related to PFAS that are on the TRI list since the proposed PFAS acids are expected to dissociate into ions under normal environmental conditions. This is consistent with EPA's longstanding interpretation that adding an ion is effectively adding a category of related compounds that dissociate into the ion (see 59 FR 61432, 61460; November 30, 1994), regarding the listing of a nitrate compounds category, which encompasses reporting of the nitrate ion released (Ref. 11)). Therefore, reporting for the PFAS categories in Unit III.B. and C includes PFAS ions because reporting on associated chemicals would be required. Explanations to support each proposed listing are provided in Unit III.

III. Technical Evaluation of the Toxicity of the PFAS Being Proposed for Addition

EPA used a combination of existing Agency human health assessments and listing support documents specifically prepared for this action to evaluate the available data on human health effects and/or environmental effects associated with the PFAS being proposed for

listing, as identified by the process described in Unit III.B. to identify sufficient evidence to support chemical listings. Summaries of the available human health effects and environmental effects information that support listing these PFAS under EPCRA section 313 are provided in Unit IV. Where final EPA PFAS assessments are available, a brief summary of the assessment findings is provided.

For PFAS without a final published hazard assessment, more detailed descriptions of the results and analyses supporting the listing support documents prepared for this action are included. See the support documents cited for each PFAS (also available in the rule docket) for more detailed information. Listing support documents created specifically for this rulemaking were developed with the TRI listing criteria in mind and are not intended to be used for purposes beyond this rulemaking. These support documents underwent review by at least three EPA scientists, one from the TRI program within the OCSPP, one from the Office of Research and Development (ORD), and one from the Office of Land and Emergency Management (OLEM). Additionally, review often included multiple additional scientists from the same office, and relevant assessments were also reviewed by scientists in the Office of Water (OW). The Agency is soliciting comment on its proposed determinations that there is sufficient evidence to establish that one or more of the criteria for listing under EPCRA section 313(d)(2) have been met.

Additionally, EPA is proposing to use the following Agency databases that have evaluated and summarized hazard and dose-response literature as a basis for listing additional PFAS: EPA HAWC PFAS 150 (2022) project and ECOTOX, as described in Unit II.B. For such proposed listings, the Agency is not producing separate listing support documents, but rather is relying on its technical expertise to review and describe data provided in these databases as providing sufficient evidence, based on scientific principles, to support such listings (*i.e.*, these databases provide data on what toxicological effects are described by studies and at what doses). EPA considers this approach a more efficient means of informing additions to the TRI chemical list and solicits comment on this approach. Given that this would constitute a shift in relying on interpretation of extracted and curated data in a knowledge delivery platform (such as ECOTOX and projects in EPA HAWC) rather than a formal listing support document for TRI listing

purposes, the Agency is soliciting comment on this approach before expanding its use for future listings. EPA notes that whether it generates a listing support document or relies on a formal hazard assessment, or it relies on interpreting curated data provided by a platform such as ECOTOX or projects in EPA HAWC, that it will review and describe the toxicity information so as to justify its finding of sufficient evidence to support a EPCRA 313(d)(2) listing criteria finding.

Unit III.B. lists the PFAS categories proposed for listing, along with the relevant EPCRA section 313(d) listing criterion/criteria. Unit III.C. lists the individual PFAS that EPA is proposing to list under this action as well as the statutory basis (as provided for the PFAS categories) for doing so.

A. Which PFAS identified in section 7321(d)(A) through (N) are not proposed for listing?

As noted in Unit II., the NDAA directed EPA to consider whether specific PFAS meet the EPCRA 313 listing criteria. Of the 39 unique PFAS identified in section 7321(d)(A) through (N) (*i.e.*, either by chemical identifier or by virtue of its inclusion in a validated drinking water analytical method), 13 PFAS have already been added to the TRI list pursuant to NDAA section 7321(b)(1) or 7321(c)(1); therefore, these chemicals need not be considered for listing in this action. EPA then reviewed available information on the remaining 26 PFAS identified in (A) through (N) to determine whether an EPCRA 313 listing was warranted, finding that nine of those PFAS meet the EPCRA 313 listing criteria (including as part of a category). Therefore, 17 PFAS are not being proposed for listing on the TRI chemical list at this time (*i.e.*, the chemicals specified in NDAA section 7321(d)(A) through (N) that are not included in this proposed action) are as follows, listed in order of inclusion under NDAA section 7321(d), with an explanation for why they are not being proposed with this action:

- *NDAA section 7321(d)(2)(B):* 2,3,3,3-Tetrafluoro 2-(1,1,2,3,3,3-hexafluoro)-2-(trifluoromethoxy) propanoyl fluoride (CASRN 2479-75-6) and (C): 2,3,3,3-Tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(trifluoromethoxy)propoxy]propanoic acid (CASRN 2479-73-4). Following the process described in Unit III.B., EPA did not locate literature that would support a listing for these chemicals, thus EPA is not proposing the addition of these chemicals.
- *NDAA section 7321(d)(2)(D):* 4,8-dioxo-3H-perfluorononanoic acid—

NDAA (ADONA) (CASRN 919005-14-4) and NDAA section 7321(d)(2)I (its 3 salts): ammonium 4,8-dioxo-3H-perfluorononanoate (CASRN 958445-44-8), sodium 4,8-dioxo-3H-perfluorononanoate (NOCAS 892452; CASRN 2250081-67-3), potassium 2,2,3-trifluoro-3-[1,1,2,2,3,3-hexafluoro-3-(trifluoromethoxy)propoxy]propanoate (CASRN 1087271-46-2): Following the process described in Unit III.B., EPA concluded that there were very limited results for ADONA and its salts, which were insufficient to support listing on the TRI.

- *NDAA section 7321(d)(2)(M):* Perfluoroheptanoic acid (PFHpA) (CASRN 375-85-9): Following the process described in Unit III.B., EPA identified potentially relevant literature evaluating human health effects of PFHpA. EPA has identified this chemical for further evaluation in future actions.

- *NDAA section 7321(d)(2)(N):* Of the PFAS for which a method to measure levels in drinking water has been validated by EPA, EPA did not identify data to support a listing based on EPCRA criteria for the following-listed PFAS:

- *Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)* (CASRN 113507-82-7): Following the process described in Unit III.B., EPA did not locate results that would support a listing, thus EPA is not proposing the addition of this chemical.

- *Nonafluoro-3,6-dioxahexanoic acid (NFDHA)* (CASRN 151772-58-6): Following the process described in Unit III.B., EPA did not locate results that would support a listing, thus EPA is not proposing the addition of this chemical.

- *N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)* (CASRN 2355-31-9): Following the process described in Unit III.B., EPA concluded that that there were very limited results for NMeFOSAA and its salts, which were unlikely to be sufficient for listing on the TRI. available data did not support a listing based on EPCRA criteria.

- *Perfluoropentanoic acid (PFPeA)* (CASRN 2706-90-3): Following the process described in Unit III.B., EPA concluded that that there were very limited results for PFPeA and its salts, which were unlikely to be sufficient for listing on the TRI. available data did not support a listing based on EPCRA criteria.

- *Perfluoropentanesulfonic acid (PFPeS)* (CASRN 2706-91-4): Following the process described in Unit III.B., EPA concluded that that there were very limited results for PFPeS and its salts, which were unlikely to be sufficient for

listing on the TRI. available data did not support a listing based on EPCRA criteria.

- *N-ethyl*

perfluorooctanesulfonamidoacetic acid (NEtFOSAA) (CASRN 2991–50–6): Following the process described in Unit III.B., EPA concluded that that there were very limited results for NEtFOSAA and its salts, which were unlikely to be sufficient for listing on the TRI. available data did not support a listing based on EPCRA criteria. However, note that we are requesting comment on this chemical as a precursor to PFOS (see Unit VII.I).

- *Perfluoroheptanesulfonic acid (PFHpS) (CASRN 375–92–8)*: Following the process described in Unit III.B., EPA concluded that available data did not support a listing based on EPCRA criteria. However, EPA did locate more data on this chemical than it did for the other chemicals in this list. A summary of EPA's findings on PFHpS is available in the docket (Ref. 17).

- *1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS) (CASRN 39108–34–4)*: Following the process described in Unit III.B., EPA concluded that that there were very limited results for 8:2FTS and its salts, which were unlikely to be sufficient for listing on the TRI. available data did not support a listing based on EPCRA criteria. Note that we are requesting comment on this chemical as a precursor to PFOA (see Unit VIII.).

- *1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS) (CASRN 757124–72–4)*: Following the process described in Unit III.B., EPA did not locate results that would support a listing; thus, EPA is not proposing the addition of this chemical.

- *Perfluoro-4-methoxybutanoic acid (PFMBA) (CASRN 863090–89–5)*: Following the process described in Unit III.B., EPA concluded that that there were very limited results for PFMBA and its salts, which were unlikely to be sufficient for listing on the TRI. Available data did not support a listing based on EPCRA criteria.

Additionally, one of the 18 PFAS that is identified in NDAA section 7321(d)(2) that is already on the TRI list is being proposed to be changed from an individual listing to being incorporated into a category.

- NDAA section 7321(d)(2)(I): Perfluorobutanesulfonate (CASRN 45187–15–3): This chemical is already on the TRI list; we are proposing it for removal as an individually-listed chemical because it is an anion for which reporting will occur based on the associated acid, perfluorobutanesulfonic acid (PFBS) (CASRN 375–73–5) see Unit

II.C. for further discussion on the proposed removal of [an]ions.

B. What are the proposed chemical categories?

This unit identifies the PFAS categories that are included in this proposed action. For a discussion on reporting for categories, please see Unit IV.

For each of the proposed categories, EPA is including the acid and the associated salts, acyl/sulfonyl halides (where relevant), and anhydride (where relevant). Because the salts will dissociate under normal environmental conditions (Ref. 18) and the acyl/sulfonyl halides and anhydride will be converted to the acid in aqueous solutions (Ref. 19), EPA posits that these other forms of the PFAS would be expected to have toxicity profiles comparable to the acid and could be anticipated to become the same primary chemical of the category (the PFAS acid) once in the environment. Given the general chemical relationship amongst the salts, acyl/sulfonyl halides, anhydride, and acid, such groupings of chemicals should therefore be reported to TRI as a chemical category.

For example, 9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS) (CASRN 756426–58–1) is the acid of the proposed category including 9Cl-PF3ONS itself, as well as its associated salt, potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (CASRN 73606–19–6). Note that some categories include PFAS that are currently on the TRI list, but which EPA is proposing to categorize together as acid and salts. A discussion for each proposed chemical category and its EPCRA listing justification(s) follow the bulleted list. An “*” indicates that the parent compound is already on TRI; the parent compound is being listed here as a proposal to extend the given listing to associated salts, acyl/sulfonyl halides, and anhydride as part of a chemical category.

The scopes of these particular PFAS categories are specific to the needs of the TRI reporting program and may not be identical to other potential categorizations or classifications for other EPA purposes. Further, the TRI PFAS categories are separate from ongoing efforts by EPA and others to define PFAS categories or “classes” for purposes of other regulatory activities as well as for research.

The following are the list of chemical categories and reason for inclusion (For TRI Reporting):

- 9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS) (CASRN 756426–58–1), Salts, and Sulfonyl

Halides Category, which is based on EPCRA 313(d)(2)(B) (Chronic Human Health) and 313(d)(2)(C) (Effect on the Environment);

- 11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS) (CASRN 763051–92–9), Salts, and Sulfonyl Halides Category, which is based on EPCRA 313(d)(2)(C) (Effect on the Environment);

- Hexafluoropropylene oxide dimer acid (HFPO–DA, GenX) (CASRN 13252–13–6)*, Salts, and Acyl Halides Category, which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);

- Perfluorobutanesulfonic acid (PFBS), Salts, Sulfonyl Halides, and Anhydride Category (CASRN 375–73–5)*, which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);

- Perfluorobutanoic acid (PFBA) (CASRN 375–22–4)*, Salts, Acyl Halides, and Anhydride Category, which is based on 313(d)(2)(B) (Chronic Human Health);

- Perfluorodecanoic acid (PFDA) (CASRN 335–76–2)*, Salts, Acyl Halides, and Anhydride Category, which is based on 313(d)(2)(B) (Chronic Human Health);

- Perfluorododecanoic acid (PFDoA) (CASRN 307–55–1)*, Salts, Acyl Halides, and Anhydride Category, which is based on 313(d)(2)(B) (Chronic Human Health);

- Perfluorohexanesulfonic acid (PFHxS) (CASRN 355–46–4)*, Salts, Sulfonyl Halides, and Anhydride Category; which is based on 313(d)(2)(B) (Chronic Human Health);

- Perfluorohexanoic acid (PFHxA) (CASRN 307–24–4)*, Salts, Acyl Halides, and Anhydride Category, which is based on 313(d)(2)(B) (Chronic Human Health);

- Perfluorononanoic acid (PFNA) (CASRN 375–95–1)*, Salts, Acyl Halides, and Anhydride Category, which is based on 313(d)(2)(B) (Chronic Human Health);

- 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS) (CASRN 27619–97–2), Salts, and Sulfonyl Halides Category, which based on 313(d)(2)(B) (Chronic Human Health);

- Perfluorooctanoic acid (PFOA) (CASRN 335–67–1)*, Salts, Acyl Halides, and Anhydride Category, which is based on 313(d)(2)(B) (Chronic Human Health);

- Perfluorooctanesulfonic acid (PFOS) (CASRN 1763–23–1)*, Salts, Sulfonyl Halides, and Anhydride Category; which is based on 313(d)(2)(B) (Chronic Human Health);

- Perfluoropropanoic acid (PFPrA) (CASRN 422–64–0), Salts, Acyl Halides, and Anhydride Category, which is based

on 313(d)(2)(B) (Chronic Human Health); and

- Perfluoroundecanoic acid (PFUnA) (CASRN 2058–94–8), Salts, Acyl Halides, and Anhydride Category, which is based on 313(d)(2)(B) (Chronic Human Health).

The Agency has provided important endpoints in the following summary. For the full toxicological profile, please refer to the respective references.

1. 9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS) (CASRN 756426–58–1), Salts, Sulfonyl Halides, and Anhydride Category

a. *Human health hazard assessment.* This category would include all associated salts and sulfonyl halides including: potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (CASRN 73606–19–6). EPA found evidence of both serious or irreversible human health effects and environmental effects due to 9Cl-PF3ONS and its salts. EPA is proposing to list 9Cl-PF3ONS and any associated salts and sulfonyl halides as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the sulfonyl halides would be expected to be converted to 9Cl-PF3ONS in aqueous solutions. Therefore, the toxicity concerns for 9Cl-PF3ONS apply to all members in this category.

Available animal data, along with supporting mechanistic data, indicate that the most sensitive targets of oral toxicity of 9Cl-PF3ONS are the liver and thyroid. Observations in available subchronic oral studies indicate that 9Cl-PF3ONS is hepatotoxic: In a 10-week drinking water study in female mice, increases in serum enzymes (e.g., ALT, AST), liver weights, and incidence of histopathological foci indicative of altered tissue architecture (e.g., hepatocytic vacuolization and ballooning) were observed at a lowest observed adverse effect level (LOAEL) of 0.003 mg/kg/day.

A similar profile of liver injury was observed in a 56-day gavage study in male mice. Significant increases in liver weights and histopathological foci (e.g., focal inflammation, lipid droplets) were observed at a LOAEL of 0.2 mg/kg/day. At the next highest administered dose (0.9 mg/kg/day), serum ALT and ALP levels were elevated 3-fold and 11-fold, respectively, and histopathological lesions indicated more severe foci of cellular injury (e.g., hepatocellular necrosis).

In a 28-day subchronic study in rats, it was also determined that 9Cl-PF3ONS had adverse effects on thyroid hormone economy (Ref. 20). Decreased serum T4 and T3 levels in males and females and

thyroid follicular hyperplasia in females were observed at ≥ 19 mg 9Cl-PF3ONS/kg-day. Mechanistic studies support that 9Cl-PF3ONS could disrupt thyroid hormone homeostasis via direct binding to thyroid hormone receptors and the carrier protein transthyretin.

Additionally, alterations in thyroid hormone levels and genes involved in the hypothalamic-pituitary-thyroid (HPT) axis were observed in zebrafish larva exposed to potassium 9Cl-PF3ONS.

Lastly, another study used a population-based, quantitative *in vitro* to *in vivo* extrapolation approach and determined that 9Cl-PF3ONS disturbed lipid homeostasis in HepG2 cells (human hepatoma cell line used for *in vitro* hepatotoxicity studies) through enhancement of lipid accumulation and fatty acid β -oxidation (Ref. 20).

b. *Ecological hazard assessment.* Several studies that evaluated sub-lethal endpoints indicate that 9Cl-PF3ONS and its potassium salt can cause adverse health effects at very low concentrations. A multi-generation chronic study with 180-day exposure of sexually mature 5-month-old zebrafish identified a lowest effect concentration (LOEC) of 0.005 mg/L for effects on growth, reproduction, and development; a NOEC was not identified; and, therefore, a maximal acceptable toxicant concentration (MATC) value could not be calculated.

In another study with zebrafish (28-day exposure the calculated aquatic chronic MATC value for hepatic effects was 0.032 mg/L. Additionally, several studies have reported the effects of 9Cl-PF3ONS and its potassium salt on thyroid hormone disruption in fish. One study reported increased thyroxine (T4) but not 3,5,30-triiodothyronine (T3) in zebrafish embryos following 5-day exposure to F–53B, the primary component of which is 9Cl-PF3ONS. The authors also conducted an *in silico* molecular docking analysis and F–53B was found to fit into the binding pocket of zebrafish thyroid transport protein (TTR) in the correct orientation, and to form three hydrogen bonds.

Another study found that chronic F–53B exposure in adult zebrafish increased T4 levels, decreased T3 levels and exhibited transgenerational thyroid hormone disrupting effects. In a chronic toxicity test with chinese rare minnow, whole body total and free 3,5,30-triiodothyronine (T3) levels were significantly increased following exposure to F–53B for 4 weeks.

Together, these studies indicate that 9Cl-PF3ONS and its potassium salt have the potential to cause thyroid hormone disruption effects (Ref. 21).

There is substantive evidence that 9Cl-PF3ONS has the potential to bioaccumulate in organisms. The tissue specific kinetic bioconcentration factor (BCF) reported in one study ranged from 228–2212 for female zebrafish and 473–4425 for male zebrafish, at 10 and 100 μ g/l exposures. In another study by the same authors, the reported whole body kinetic BCF was 3,612 at the nominal 10 μ g/l exposure and 3,615 at the nominal 100 μ g/l exposure. Several observational studies have reported the detection of F–53B in aquatic organisms (Ref. 21).

c. *Conclusion.* EPA believes there is sufficient evidence to list the 9Cl-PF3ONS, Salts, Sulfonyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible adverse liver and thyroid effects of this substance, and pursuant to section 313(d)(2)(C)(iii) for its environmental toxicity and bioaccumulation.

2. 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) (CASRN 763051–92–9), Salts, Sulfonyl Halides, and Anhydride Category

This category would include all associated salts and sulfonyl halides including: potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate (CASRN 83329–89–9). EPA found evidence of serious environmental effects of 11Cl-PF3OUdS and its salts and sulfonyl halides. EPA is proposing to list 11Cl-PF3OUdS and its associated salts, sulfonyl halides, and anhydride as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the sulfonyl halides would be expected to be converted to 11Cl-PF3OUdS in aqueous solutions. Therefore, the toxicity concerns for 11Cl-PF3OUdS apply to all members in this category.

a. *Ecological hazard assessment.* 11 cL-PF3OUdS showed a lethal effect in zebrafish larvae after a 7-day exposure [$LC_{50} \leq 0.8$ mg/L–0.8ppm]. This value has been calculated by the conversion of $\sim 1.2 \mu$ M which was obtained from the linear dose-response curve for 11cl-PF3OUdS. This nominal LC_{50} of 0.8 mg/L suggests moderate to high concern for hazard upon acute exposure of aquatic organisms (i.e., fish) to 11cl-PF3OUdS, especially given that actual concentrations were likely lower than nominal (Ref. 22).

Persistence in the environment is expected to be high for 11cl-PF3OUdS and its potassium salt. In an aerobic biodegradation study using loam surface soils with $\sim 22\%$ moisture content at 24°C , negligible degradation of 11cl-

PF3OUdS was observed after 105 days (Ref. 22).

Available data suggest that 11cl-PF3OUdS may bioaccumulate significantly in aquatic species [e.g., a whole-body BCF of 9,800 L/kg* and whole-body bioaccumulation factor (BAF) of 14,000 L/kg was determined for 11cl-PF3OUdS in the experimental studies of Chinese rare minnows and black-spotted frogs, respectively. *Note that for the study with the Chinese rare minnows, animals were exposed to the mixture F-53B, of which 11cl-PF3OUdS is a component. BCF (protein) was also determined to be 58,000 L/Kg (average) for 11cl-PF3OUdS in the experimental studies for rainbow trout] (Ref. 22).

b. *Conclusion.* EPA believes there is sufficient evidence to list the 11cl-PF3OUdS, Salts, Sulfonyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii) for serious or irreversible reproductive dysfunctions and other chronic effects on the liver, development, hematological system, and immune system after oral exposure.

3. Hexafluoropropylene Oxide Dimer Acid (HFPO-DA; Gen X) (CAS 13252-13-6), Salts, and Acyl Halides Category

This category would include all associated salts and acyl halides including: propanoyl fluoride, 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)-] (HFPO-DAF) (CASRN 2062-98-8), ammonium perfluoro-2-methyl-3-oxahexanoate (also known as and currently TRI-listed as hexafluoropropylene oxide dimer acid (HFPO-DA) ammonium salt) (CASRN 62037-80-3), potassium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propanoate (CASRN 67118-55-2) and sodium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propanoate (CASRN 67963-75-1).

HFPO-DA was added to the TRI list automatically in January 2020 pursuant to NDAA section 7321(b)(1)(F). EPA is proposing to list HFPO-DA and its associated salts and acyl halides as a single TRI category, as the salts would dissociate in aqueous solutions and the acyl halides would be expected to be converted to HFPO-DA in aqueous solutions. Therefore, the toxicity concerns apply to all members in this category.

a. *Human health hazard assessment.* A 2021 EPA human health assessment exists for HFPO-DA and its ammonium salt (i.e., GenX chemicals). Based on the available data, the liver was identified as the most sensitive target of HFPO-DA toxicity and a subchronic reference dose (RfD) of 3×10^{-5} mg/kg bw-day and a chronic RfD of 3×10^{-6} mg/kg bw-day was derived (Ref. 23).

Other effects observed in rats and/or mice following HFPO-DA exposure included kidney toxicity (e.g., increased relative kidney weight), immune effects (e.g., antibody suppression), hematological effects (e.g., decreased red blood cell count, hemoglobin, and hematocrit), reproductive/developmental effects (e.g., increased early deliveries, placental lesions, changes in maternal gestational weight gain, and delays in genital development in offspring), and cancer (e.g., liver and pancreatic) (Ref. 23). There is *Suggestive Evidence of Carcinogenic Potential* in humans for the oral route of exposure (Ref. 23).

b. *Conclusion.* EPA believes there is sufficient evidence to list the HFPO-DA, Salts, and Acyl Halides category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii) for serious or irreversible reproductive dysfunctions and other chronic effects on the liver, development, hematological system, and immune system after oral exposure.

4. *Perfluorobutanesulfonic Acid (PFBS) (375-73-5), Salts, Sulfonyl Halides, and Anhydride Category

This category would include all associated salts, sulfonyl halides, and anhydride including: perfluorobutanesulfonyl fluoride (CASRN 375-72-4), potassium perfluorobutane sulfonate (CASRN 29420-49-3), perfluorobutanesulfonic anhydride (CASRN 36913-91-4), sodium nonafluorobutane-1-sulfonate (CASRN 60453-92-1), ammonium perfluorobutanesulfonate (CASRN 68259-10-9), bis(2-hydroxyethyl)ammonium perfluorobutanesulfonate (CASRN 70225-18-2), lithium nonafluorobutane-1-sulfonate (CASRN 131651-65-5), tetrabutylphosphonium perfluorobutanesulfonate (CASRN 220689-12-3) and magnesium nonafluorobutanesulfonate (CASRN 507453-86-3). This category does not include ionic forms such as perfluorobutanesulfonate (CASRN 45187-15-3), though any conversion of those ions into PFBS or associated salts would constitute manufacturing for purposes of EPCRA section 313 and must be considered towards the PFBS, Salts, Sulfonyl Halides, and Anhydride category reporting threshold. If the PFAS category reporting threshold is met, then the facility's releases and other waste activities for this category will include those of the ion. In April 2021, EPA published final human health toxicity values for PFBS and the related compound potassium perfluorobutanesulfonate (CASRN 29420-49-3) (Ref. 24) therefore, these

chemicals have already been added to the TRI chemical list pursuant to NDAA section 7321(c). EPA is now proposing to list PFBS, its associated salts, sulfonyl halides, and anhydride as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the sulfonyl halides and anhydride would be expected to be converted to PFBS in aqueous solutions. Therefore, the toxicity concerns for PFBS apply to all members in this category.

a. *Human health hazard assessment.* Health outcomes evaluated across available studies included effects on the thyroid and developing offspring following oral exposure to PFBS. There was a small number of epidemiology studies per outcome, which had limitations including poor sensitivity resulting from low exposure levels. Similar patterns of decreases in thyroid hormones (i.e., total T3, total T4, and free T4) were observed in PFBS-exposed pregnant mice and gestationally exposed female mouse offspring at ≥ 200 mg/kg-d and in nonpregnant adult female and adult male rats at ≥ 62.6 mg/kg-d. These decreases were statistically significant (~20% in dams and ~50% in offspring), were shown to persist at least 60 days after gestational exposure in offspring and exhibited dose dependence (Ref. 24).

In the only mouse developmental study, developmental effects and altered markers of female reproductive development or function were observed in female offspring after gestational PFBS exposure, including decreased body weight, delayed eye opening, delayed vaginal opening, altered estrous cyclicity (including prolonged diestrus), altered reproductive hormones (e.g., decreased estradiol and progesterone), and effects on reproductive organs (e.g., weight and ovarian morphology). Most effects were observed at ≥ 200 mg/kg-d, with several changes noted at PND 60. Endpoints relating to pregnancy, survival, and fetal morphological alterations were unchanged in both rats and mice and endpoints relating to fertility were unchanged in parental rats and mice across the four available studies. Alterations in histopathological markers of fertility were observed in mouse offspring, though the reproductive function of those offspring was not tested. In other studies, developmental body weight changes in rat offspring were either unchanged or observed only at doses causing parental toxicity (Ref. 24).

The PFBS toxicity assessment derived subchronic and chronic oral RfDs of 0.0009 mg/kg-day and 0.0003 mg/kg-

day, respectively, based on thyroid effects (Ref. 24).

EPA found that PFBS and its associated salts are known to cause or reasonably anticipated to cause serious or irreversible chronic health effects to the thyroid, and to have serious or irreversible reproductive/developmental effects.

b. *Conclusion.* EPA believes there is sufficient evidence to list the PFBS, Salts, Sulfonyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible thyroid toxicity and reproductive/developmental effects.

5. * Perfluorobutanoic Acid (PFBA) (CASRN 375–22–4), Salts, Acyl Halides, and Anhydride Category

This category would include all associated salts and acyl halides including: perfluorobutanoyl fluoride (CASRN 335–42–2), perfluorobutanoic anhydride (CASRN 336–59–4), heptafluorobutyl chloride (CASRN 375–16–6), sodium perfluorobutanoate (CASRN 2218–54–4), potassium perfluorobutanoate (CASRN 2966–54–3), silver heptafluorobutyrate (CASRN 3794–64–7), ammonium perfluorobutanoate (CASRN 10495–86–0), rhodium(II) perfluorobutyrate dimer (CASRN 73755–28–9). This category does not include ionic forms such as perfluorobutanoate (CASRN 45048–62–2), though any conversion of those ions into PFBA or associated salts (including via dissociation in aqueous solution) would constitute manufacturing for purposes of EPCRA section 313 and must be considered towards the PFBA, Salts, Acyl Halides, and Anhydride category reporting threshold.

In December 2022, EPA published an IRIS assessment for PFBA and associated salts (CASRNs 10495–86–0, 2218–54–4, 2966–54–3, 45048–62–2) (Ref. 25); therefore, these chemicals have already been added to the TRI chemical list pursuant to NDAA section 7321(c). EPA is now proposing to list PFBA and its associated salts as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the acyl halides would be expected to be converted to PFBA in aqueous solutions. This rule is also proposing to add silver heptafluorobutyrate (CASRN 3794–64–7) to TRI as part of this category. While the IRIS assessment did not necessarily extend to non-alkali metal salts such as silver heptafluorobutyrate due to PFBA-independent toxicity contributors, the overall compound has at least the same toxicity of the associated acid, PFBA. The toxicity concerns for PFBA that

support a TRI listing apply to all members in this category.

a. *Human health hazard assessment.* The currently available evidence indicates hazards likely exist with respect to the potential for thyroid, liver, and developmental effects in humans, given sufficient PFBA exposure conditions. These judgments are based on data from short-term (28-day exposure), subchronic (90-day exposure), and developmental (17-day gestational exposure) oral-exposure studies in rodents (Ref. 25).

A consistent and coherent pattern of thyroid effects including hormonal, organ weight, and histopathological changes were observed, generally at PFBA exposure levels ≥ 30 mg/kg-day, although some notable effects were observed at 6 mg/kg-day. Consistent, dose-dependent decreases in total and free T4 were observed independent of any effect on TSH. Additionally, increased thyroid weights and increases in thyroid follicular hypertrophy were observed. Because of the similarities in the production and regulation of thyroid hormone homeostasis between rodents and humans, the effects in rodents were considered relevant to humans (Ref. 25).

Across various studies, liver effects were generally seen at PFBA exposure levels ≥ 30 mg/kg-day. The PFBA-induced effects were observed in two species (rats and mice), in males and females, and across multiple exposure durations (short-term, subchronic, and gestational). Consistent, coherent, dose-dependent, and biologically plausible effects were observed for increased liver weights and increased incidences of hepatic histopathological lesions. Supporting the biological plausibility and human relevance of these effects is mechanistic information that suggests non-peroxisome proliferator-activated receptor alpha (PPAR α) mode of actions (MOAs) could explain some of the observed effects in exposed rodents and that observed effects might be precursors to clearly adverse health outcomes such as steatosis (Ref. 25).

PFBA exposure caused delays in developmental milestones (days to eye opening and vaginal opening) without effects on fetal (pup) growth at ≥ 175 mg/kg-day. The results demonstrate a constellation of effects affecting the developing organism that is internally coherent (within-study) and consistent across related PFAS compounds, including PFBS, PFOA, and PFOS. These developmental effects are considered relevant to humans (Ref. 25).

Based on liver and thyroid effects, the PFBA toxicity assessment derived an overall RfD of 1×10^{-3} mg/kg-day.

EPA found that PFBA and its associated salts are known to cause or can reasonably be anticipated to cause serious or irreversible chronic health effects to both endocrine and hepatic systems. The IRIS assessment found increased hepatocellular hypertrophy (liver), as well as decreased total T4 (thyroid). Available evidence also indicates that PFBA exposure during pregnancy or *in utero* likely causes developmental effects.

b. *Conclusion.* EPA believes there is sufficient evidence to list the PFBA, Salts, Acyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible endocrine, liver, and thyroid effects.

6. * Perfluorodecanoic acid (PFDA) (CASRN 335–76–2), Salts, Acyl Halides, and Anhydride Category

This category would include all associated salts and acyl halides including: perfluorodecanoyl chloride (CASRN 307–38–0), ammonium perfluorodecanoate (CASRN 3108–42–7), sodium perfluorodecanoate (CASRN 3830–45–3), and perfluorodecanoic anhydride (CASRN 942199–24–8).

PFDA was added to the TRI list automatically in January 2020 pursuant to NDAA section 7321(b)(1)(E). In July 2024, EPA published an IRIS assessment for PFDA and associated salts (CASRNs 3108–42–7 and 3830–45–3), thereby causing these specific salts to be added to the TRI chemical list pursuant to NDAA section 7321(c). EPA is proposing to list PFDA and its associated salts and acyl halides as a single TRI category, as the salts are expected to dissociate in aqueous solutions and the acyl halides would be expected to be converted to PFDA in aqueous solutions. Therefore, the toxicity concerns of PFDA apply to all members in this category.

a. *Human health hazard assessment.* In July 2024, EPA finalized its IRIS assessment for PFDA and related salts (ammonium perfluorodecanoate (PFDA NH₄, CASRN 3108–42–7) and sodium perfluorodecanoate (PFDA-Na, CASRN 3830–45–3)) (Ref. 26). Overall, the available evidence indicates that PFDA exposure is likely to cause liver, immune, developmental, and male and female reproductive effects in humans, given sufficient exposure conditions. The review concludes that the available evidence indicates PFDA exposure is likely to cause adverse liver effects in humans based on concordant effects for increased liver weight, alterations in levels of serum biomarkers of liver injury (ALT, AST, ALP, bile salts/acids, bilirubin and blood proteins), and some

evidence of hepatocyte degenerative or necrotic changes that provide support for the adversity of PFDA-induced liver toxicity reported in rats and mice exposed to PFDA doses ≥ 0.156 mg/kg-day (Ref. 26).

The hazard identification judgement that PFDA exposure is likely to cause immunotoxicity, specifically immunosuppression, in humans, is based primarily on consistent evidence of reduced antibody responses from human epidemiological studies (three studies in children and one in adults) at levels of 0.3 ng/mL (median exposure in studies observing an adverse effect). Reduced antibody response is an indication of immunosuppression and may result in increased susceptibility to infectious disease (Ref. 27). The antibody results present a consistent pattern of findings that higher prenatal, childhood, and adult serum concentrations of PFDA were associated with suppression of at least one measure of the antivaccine antibody response to common vaccines in two well-conducted birth cohorts in the Faroe Islands and supported by a low confidence study in adults. An inverse association was observed in 21 of 26 evaluations, with a minimum of a 2% decrease in antibody concentration per doubling of PFDA concentration at levels consistent with the general population in NHANES; six of these evaluations were statistically significant and exhibited a large magnitude of effect (*i.e.*, $>18\%$ decrease in response). These associations were observed despite poor study sensitivity, which increases confidence in the findings (Ref. 26). Additionally, the results are consistent with evidence of an association between exposure to PFOS and PFOA and reduced antibody responses in human studies indicative of potential immunosuppression (Ref. 28, 29).

PFDA is likely to cause developmental toxicity in humans. This conclusion is based on dose-dependent decreases in fetal weight in mice gestationally exposed to PFDA at doses ≥ 0.5 mg/kg-day, and is further supported by evidence of decreased birth and childhood weight from studies of exposed humans in which PFDA was measured during pregnancy, primarily with median PFDA values ranging from 0.11 to 0.46 ng/mL. This conclusion is further supported by coherent epidemiological evidence for biologically related effects (*e.g.*, decreased postnatal growth and birth length) (Ref. 26).

A 28-day study in rats indicated that PFDA exposure is likely to cause adverse effects to the male reproductive

system, based on alterations in sperm counts, testosterone levels, and male reproductive histopathology and organ weights at doses ≥ 0.625 mg/kg-day. In the same study, PFDA was shown to decrease the number of days spent in estrus and increase the amount of time spent in diestrus in female rats at ≥ 1.25 mg/kg-day. A continuous state of diestrus started at Day 21 in female rats exposed to 2.5 mg/kg-day. *In vitro* and intraperitoneal studies corroborate the effects seen in male rodents and suggest that PFDA disrupts Leydig cell function, resulting in reduced steroidogenesis and testosterone (Ref. 26).

The Agency derived a lifetime and subchronic oral RfD for noncancer effects of 2×10^{-9} mg/kg-day based on immune and developmental effects (Ref. 26).

b. *Conclusion.* EPA believes there is sufficient evidence to list the PFDA, Salts, Acyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B) for serious or irreversible reproductive dysfunctions and other chronic effects on the liver, development, and immune system.

7. * Perfluorododecanoic Acid (PFDoA) (CASRN 307–55–1), Salts, Acyl Halides, and Anhydride Category

This category would include all associated salts and acyl halides including: ammonium tricosulfuradodecanoate (CASRN 3793–74–6) and perfluorododecanoic anhydride (CASRN 1456735–80–0). PFDoA was added to the TRI list automatically in January 2020 pursuant to NDAA section 7321(b)(1)(E). EPA is proposing to list PFDoA and its associated salts and acyl halides as a single TRI category, as the salts are expected to dissociate in aqueous solutions and the acyl halides would be expected to be converted to PFDoA in aqueous solutions. Therefore, the toxicity concerns of PFDoA apply to all members in this category.

a. *Human health hazard assessment.* Available animal data indicate that the most sensitive target of oral toxicity of PFDoA in rats is the liver, with a systemic NOAEL of 0.1 mg/kg-day and a LOAEL of 0.5 mg/kg-day based on increased liver weights in males and females. Toxicity to both the male and female reproductive systems has been observed in rats following oral exposure to PFDoA, including changes in serum hormone levels, histopathological changes in reproductive organs (various histopathological lesions were observed in the reproductive organs of male rats exposed to 2.5 mg/kg-day for 42 days (starting 14 days prior to mating)), and alterations in estrous cyclicity in female

rats, with the most sensitive changes observed at doses as low as 0.2 mg/kg-day. The majority of female rats exposed to 2.5 mg/kg-day could not maintain a pregnancy with most dying due to pregnancy and/or delivery complications prior to scheduled sacrifice. Gestation and delivery indices were significantly lower at 2.5 mg/kg-day, with only $\frac{1}{3}$ of the surviving dams delivering live pups. In female reproductive organs, hemorrhage of the implantation site and/or congestion in the endometrium were detected in the uterus of all 7 females found dead or moribund at the end of the gestation period. Hemorrhage at the implantation site was also found in one female that did not deliver live pups (all pups were stillborn). In one litter, the number of normally delivered pups in the 2.5 mg/kg-day group was 16; however, two of them were found dead on nursing day 0. Although the other 14 pups survived to the end of the study, their body weights on PNDs 0, 1, and 4 were markedly lower than those of the control group. Body weight in females in the main group was significantly decreased at 2.5 mg/kg/day through the gestation period (Ref. 30).

b. *Conclusion.* EPA believes there is sufficient evidence to list the PFDoA, Salts, Acyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(I) and (IV) for serious or irreversible reproductive dysfunctions and liver effects.

8. * Perfluorohexanesulfonic Acid (PFHxS) (CASRN 355–46–4), Salts, Sulfonyl Halides, and Anhydride Category

This category would include all associated salts and sulfonyl halides including: perfluorohexanesulfonyl fluoride (CASRN 423–50–7), potassium perfluorohexanesulfonate (CASRN 3871–99–6) (currently TRI-listed as “1-hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, potassium salt”), lithium perfluorohexanesulfonate (CASRN 55120–77–9), ammonium perfluorohexanesulfonate (CASRN 68259–08–5) (currently TRI-listed as “1-hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, ammonium salt”), bis(2-hydroxyethyl)ammonium perfluorohexanesulfonate (CASRN 70225–16–0) (currently TRI-listed as “1-hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1)”, sodium perfluorohexanesulfonate (CASRN 82382–12–5), and perfluorohexanesulfonic anhydride (CASRN 109065–55–6).

PFHxS was added to the TRI list automatically in January 2020 pursuant to NDAA section 7321(b)(1)(I). EPA is now proposing to list PFHxS and its associated salts and sulfonyl halides as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the sulfonyl halides would be expected to be converted to PFHxS in aqueous solutions. Therefore, the toxicity concerns for PFHxS apply to all members of this category.

In July 2023, a draft IRIS toxicological review for PFHxS and related salts (potassium perfluorohexanesulfonate (CASRN 3871–99–6), ammonium perfluorohexanesulfonate (CASRN 68259–08–5), and sodium perfluorohexanesulfonate (CASRN 82382–12–5), as well as nonmetal and alkali metal salts of PFHxS) was released for public comment and is currently undergoing external peer review (Ref. 31).

a. Human health hazard assessment. The draft IRIS assessment concludes that the evidence indicates PFHxS exposure is likely to cause immunotoxicity and thyroid toxicity in humans, given sufficient exposure conditions. The primary supporting evidence for immunotoxicity included consistent findings of decreased antibody responses to vaccination against tetanus or diphtheria in children (Ref. 31). The evidence for thyroid toxicity, specifically decreased thyroid hormones, is based primarily on a short-term study and two multigenerational studies in rats reporting a consistent and coherent pattern of hormonal changes at PFHxS exposure levels ≥ 2.5 mg/kg-day. A consistent dose-dependent decrease of T4, and to a lesser extent T3, in adult and juvenile rats, with a magnitude of effect (up to 70%) in the absence of effects in TSH was observed (with males being more sensitive). In addition, one multigenerational study reported increased incidence of minimal thyroid hypertrophy and moderate hyperplasia in male rats after PFHxS exposure. Due to the similarities in thyroid hormone production between rodents and humans, the effects in rodents were considered relevant to humans (Ref. 31).

The Agency derived a lifetime and subchronic oral RfD for noncancer effects of 4×10^{-10} mg/kg-day based on immune effects (decreased serum anti-tetanus antibody concentration in children) (Ref. 31).

b. Conclusion. EPA believes there is sufficient evidence to list the PFHxS, Salts, Sulfonyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible chronic effects on the thyroid and immune system.

9. Perfluorohexanoic Acid (PFHxA) (CASRN 307–24–4), Salts, Acyl Halides, and Anhydride Category

This category would include all associated salts and acyl halides including: perfluorohexanoic anhydride (CASRN 308–13–4), silver perfluorohexanoate (CASRN 336–02–7), perfluorohexanoyl fluoride (CASRN 355–38–4), perfluorohexanoyl chloride (CASRN 335–53–5), sodium perfluorohexanoate (CASRN 2923–26–4), potassium undecafluorohexanoate (CASRN 3109–94–2), and ammonium perfluorohexanoate (CASRN 21615–47–4). In April 2023, EPA finalized a toxicity value for PFHxA and related salts (specifically, ammonium perfluorohexanoate and sodium perfluorohexanoate) (Ref. 32). Accordingly, PFHxA and those salts specified by CASRN were automatically added to the TRI chemical list as of January 1, 2024, pursuant to the NDAA section 7321(c)(1)(A)(i). EPA is now proposing to list PFHxA and its associated salts and acyl halides as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the acyl halides would be expected to be converted to PFHxA in aqueous solutions. This rule is also proposing to add non-alkali metals including silver perfluorohexanoate (CASRN 336–02–7) to this category. The IRIS assessment did not necessarily extend to non-alkali metal salts such as silver perfluorohexanoate. Due to PFHxA-independent toxicity contributors, the metal portion of the salt may present additional toxicity concerns (e.g., a mercury salt would have additional toxicity concerns beyond any toxicity concerns associated with the acid due to the presence of mercury). However, the IRIS assessment does establish that the overall compound has at least the same toxicity of the associated acid. The toxicity concerns for PFHxA apply to all members in this category.

a. Human health hazard assessment. Overall, the available evidence indicates that PFHxA likely causes hepatic, developmental, hematopoietic, and thyroid-related endocrine effects in humans. Specifically, for hepatic effects, the primary support for this hazard conclusion included evidence of increased relative liver weights and increased incidence of hepatocellular hypertrophy in adult rats. These hepatic findings correlated with changes in clinical chemistry (e.g., serum enzymes, blood proteins) and necrosis. Developmental effects were identified as a hazard based on evidence of decreased offspring body weight and increased

perinatal mortality in exposed rats and mice. For hematopoietic effects, the primary supporting evidence included decreased red blood cell counts, decreased hematocrit values, and increased reticulocyte counts in adult rats. A 28-day study in rats showed a strong dose-dependent decrease in serum thyroid hormones in males. An overall RfD of 5×10^{-4} mg/kg-day was selected based on developmental effects (decreased postnatal body weight) and is considered protective of the other effects (Ref. 32).

b. Conclusion. EPA believes there is sufficient evidence to list the PFHxA, Salts, Acyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible chronic effects on the liver, thyroid, hematopoietic system, and development.

10. Perfluorononanoic Acid (PFNA) (CASRN 375–95–1), Salts, Acyl Halides, and Anhydride Category

This category would include all associated salts and acyl halides including: heptadecafluorononanoyle fluoride (CASRN 558–95–2), ammonium perfluorononanoate (CASRN 4149–60–4), potassium perfluorononanoate (CASRN 21049–38–7), sodium heptadecafluorononanoate (CASRN 21049–39–8), and heptadecafluorononanoyle chloride (CASRN 52447–23–1), and perfluorononanoic anhydride (CASRN 228407–54–3). PFNA has been on the TRI list since January 1, 2020, pursuant to NDAA section 7321(b)(1)(H). EPA is now proposing to list PFNA and its associated salts and acyl halides as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the acyl halides would be expected to be converted to PFNA in aqueous solutions. Therefore, the toxicity concerns for PFNA apply to all members in this category.

a. Human Health Hazard Assessment. In April 2024, EPA finalized a National Primary Drinking Water Rule (NPDWR) for PFOA and PFOS, as well as three other PFAS (PFNA, PFHxS and HFPO-DA) and mixtures of two or more of four PFAS (PFNA, PFHxS, HFPO-DA and PFBS); one of the PFAS covered in the NPDWR is PFNA (89 CFR 32532; April 26, 2024) (Ref. 33). In the final NPDWR, EPA cited associations between PFNA exposure and adverse hepatic effects and limited evidence for decreased antibody response in epidemiological studies (Ref. 4). The final NPDWR also noted that results of a 2023 meta-analysis suggest that decreases in birth weight are an adverse effect of PFNA exposure in humans (Ref. 34). In animal

studies, offspring of PFNA-exposed rodents had reduced bodyweights and survival, and delayed development (Ref. 4). ATSDR established an intermediate-duration oral minimal risk level (MRL) of 3×10^{-6} mg/kg/day for PFNA based on decreased body weight gain and developmental delays in mice born to mothers that were orally exposed to PFNA during gestation (with presumed continued indirect exposure of offspring via lactation) (Ref. 4). EPA concluded that studies on exposure to PFNA support adverse effects, including effects on development, reproduction, immune function, and the liver (Ref. 4, 33).

The draft IRIS assessment for PFNA (Ref. 35) supported the findings in the ATSDR toxicological profile and the NPDWR's conclusions that toxic endpoints were development, reproduction, and the liver, but stated that the evidence of immunotoxicity was only suggestive. The draft IRIS assessment indicated that there is robust epidemiological evidence that PFNA exposure is associated with deficits in birth weight, and that this finding is supported by coherent findings of postnatal growth restriction and to a lesser degree decreased birth length (Ref. 35). The overall lifetime oral RfD of 7×10^{-9} mg/kg-day was selected based on developmental effects (decreased birth weight) (Ref. 35).

b. *Conclusion.* EPA believes there is sufficient evidence to list the PFNA, Salts, Acyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(I) and (IV) for serious or irreversible reproductive dysfunctions and other chronic health effects in humans (including reproduction/development and liver effects).

11. 1H,1H, 2H, 2H-Perfluorooctane Sulfonic Acid (6:2 fluorotelomer sulfonic acid, 6:2 FTS) (CASRN 27619-97-2), Salts, Sulfonyl Halides, and Anhydride Category

This category would include all associated salts and sulfonyl halides including: 1H,1H,2H,2H-perfluorooctyl iodide (CASRN 2043-57-4), 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctanesulfonyl chloride (CASRN 27619-89-2), sodium 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctane-1-sulfonate (CASRN 27619-94-9), potassium 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctanesulphonate (CASRN 59587-38-1), 6:2 fluorotelomer sulphonate ammonium (CASRN 59587-39-2) and 1-octanesulfonic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-, barium salt (2:1) (CASRN 1807944-82-

6). EPA is proposing to list 6:2 FTS and its associated salts and sulfonyl halides as a single TRI category, as the salts are expected to dissociate in aqueous solutions and the sulfonyl halides would be expected to be converted to 6:2 FTS in aqueous solutions. Therefore, the toxicity concerns for 6:2 FTS apply to all members in this category.

a. *Human health hazard assessment.* EPA reviewed available literature in EPA HAWC for 6:2 FTS, as identified in Carlson *et al.*, (Ref. 14) and Radke *et al.* (Ref. 36) (PFAS 150 (2022) project). (For study details, see: <https://hawc.epa.gov/assessment/100500085/>.) A 28-day repeated-dose oral gavage study in male CD-1 mice by Sheng *et al.* (Ref. 37), which was evaluated as medium confidence for clinical chemistry and body/liver weights, found significant increases in absolute and relative liver weights relative to controls, with no effect on body weights. Serum levels of AST and albumin (ALB) were also significantly increased. Study results also qualitatively reported histopathological observations consistent with liver injury, including necrosis and hepatocellular hypertrophy. The effect size for increased liver weight is considered biologically significant (22% increase relative to controls).

Other studies included in the EPA HAWC PFAS 150 (2022) project (as supplemental studies) for 6:2 FTS include assessments summarized by the European Chemicals Agency (ECHA), describing mechanistic evidence and genotoxicity. ECHA assessed the genotoxicity of 6:2 FTS in *in vitro* and *in vivo* assays. Overall, 6:2 FTS was positive for inducing structural chromosomal aberrations in Chinese Hamster Ovary (CHO) cells but was negative in all other genotoxicity assays. Other mechanistic evidence suggests 6:2 FTS exposure induces inflammation, including in the liver, and disrupts liver gene expression. Sheng *et al.*, (Ref. 37) reported increased cytokines in serum and liver (TNF α , IL β , IL-10), and increased expression of proteins indicative of an inflammatory response (IkB α , NF κ B/p65, NRF-2, TRL-4, and TNFR-2) in male CD-1 mice after 28 days of oral exposure to 6:2 FTS at a dose of 5 mg/kg/day.

b. *Conclusion.* EPA believes there is sufficient evidence to list the 6:2 FTS, Salts, Sulfonyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(ii)(IV) for serious or irreversible chronic effects (including adverse liver and genotoxicity effects).

12. Perfluorooctanoic Acid (PFOA) (CASRN 335-67-1), Salts, Acyl Halides, and Anhydride Category

This category would include all associated salts and acyl halides including: pentadecafluorooctanoyl chloride (CASRN 335-64-8), pentadecafluorooctanoyl fluoride (CASRN 335-66-0), silver perfluorooctanoate (CASRN 335-93-3) (currently TRI-listed as "silver(I) perfluorooctanoate"), sodium perfluorooctanoate (CASRN 335-95-5), potassium perfluorooctanoate (CASRN 2395-00-8), ammonium perfluorooctanoate (CASRN 3825-26-1), lithium perfluorooctanoate (CASRN 17125-58-5), cesium perfluorooctanoate (CASRN 17125-60-9), perfluorooctanoic anhydride (CASRN 33496-48-9), chromium perfluorooctanoate (CASRN 68141-02-6) (currently TRI-listed as chromium(III) perfluorooctanoate) and potassium pentadecafluorooctanoate—water (1:1:2) (CASRN 98065-31-7). In January 2020, PFOA and three of its salts were automatically added to the TRI chemical list as individual chemicals pursuant to the NDAA section 7321(b)(1)(A) and (B). EPA is now proposing to list PFOA and its associated salts and acyl halides as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the acyl halides would be expected to be converted to PFOA in aqueous solutions. Therefore, the toxicity concerns for PFOA apply to all members in this category.

a. *Human health hazard assessment.* EPA developed a National Primary Drinking Water Regulation for PFOA, which was finalized on April 26, 2024 (Ref. 33), and as part of the rulemaking, EPA published the "Final—Human Health Toxicity Assessment for Perfluorooctanoic Acid (PFOA) and Related Salts" (Ref. 38). The Agency determined that PFOA is *Likely to be Carcinogenic to Humans* based on the 2005 *Guidelines for Carcinogen Risk Assessment* (Ref. 39) and developed a draft cancer slope factor (CSF) of 0.0293 (ng/kg bw-day) $^{-1}$ based on renal cell carcinomas in human males. The Agency also developed a draft chronic RfD of 3×10^{-8} mg/kg bw-day, based on the following co-critical effects: decreased anti-tetanus and anti-diphtheria antibody concentrations in children; decreased birth weight; and increased total serum cholesterol in adults. The Agency considers the RfDs to be applicable to both short-term and chronic risk assessment scenarios because two of the co-critical effects identified for PFOA are developmental effects that can potentially result from

short-term PFOA exposure during a critical period of development. Therefore, short-term PFOA exposure during a critical period of development may lead to adverse health effects across life stages (Ref. 38).

b. *Conclusion.* EPA believes there is sufficient evidence to list the PFOA, Salts, Acyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(i) and (ii)(IV) for serious or irreversible chronic human health effects (including cancer and developmental effects).

13. Perfluorooctanesulfonic Acid (PFOS) (CASRN 1763–23–1), Salts, Sulfonyl Halides, and Anhydride Category

This category would include all associated salts and sulfonyl halides including: perfluorooctylsulfonyl fluoride (CASRN 307–35–7), perfluorooctanesulfonic anhydride (CASRN 423–92–7), potassium perfluorooctanesulfonate (CASRN 2795–39–3), sodium perfluorooctanesulfonate (CASRN 4021–47–0), ammonium perfluorooctanesulfonate (CASRN 29081–56–9) (currently TRI-listed as “1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-, ammonium salt”), lithium perfluorooctanesulfonate (CASRN 29457–72–5) (currently TRI-listed as “lithium (perfluorooctane)sulfonate”), tetraethylammonium perfluorooctanesulfonate (CASRN 56773–42–3) (currently TRI-listed as “Ethanaminium, N,N,N-triethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-1-octanesulfonic acid (1:1)”), 1-octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-, compd. With 2,2'-iminobis[ethanol] (1:1) (CASRN 70225–14–8), magnesium bis(heptadecafluorooctanesulfonate) (CASRN 91036–71–4), and tetrabutylammonium perfluorooctanesulfonate (CASRN 111873–33–7). In January 2020, PFOS and five of its salts were automatically added to the TRI chemical list as individual chemicals pursuant to the NDAA section 7321(b)(1)(C) and (D). EPA is now proposing to list PFOS and its associated salts and sulfonyl halides as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the sulfonyl halides would be expected to be converted to PFOS in aqueous solutions. Therefore, the toxicity concerns for PFOS apply to all members in this category.

a. *Human health hazard assessment.* The Agency determined that PFOS is

Likely to be Carcinogenic to Humans based on the 2005 *Guidelines for Carcinogen Risk Assessment* (Ref. 39) and developed a draft CSF of 39.5 (mg/kg bw-day)^{–1} based on hepatocellular adenomas and carcinomas in female rats (Ref. 40). The Agency also developed a chronic RfD of 1.0×10^{-7} mg/kg bw-day, based on co-critical effects of decreased birthweight in infants and increased serum total cholesterol in adults. The Agency considers the RfDs to be applicable to both short-term and chronic risk assessment scenarios because one of the co-critical effects identified for PFOS is a developmental effect that can potentially result from short-term PFOS exposure during a critical period of development. Therefore, short-term PFOS exposure during a critical period of development may lead to adverse health effects across life stages (Ref. 40).

b. *Conclusion.* EPA believes there is sufficient evidence to list the PFOS, Salts, Sulfonyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(i) and (ii)(IV) for serious or irreversible chronic human health effects (including cancer and developmental effects).

14. Perfluoropropanoic Acid (PFPrA) (CASRN 422–64–0), Salts, Acyl Halides, and Anhydride Category

This category would include all associated salts, acyl halides, and the anhydride including: pentafluoropropanoic anhydride (CASRN 356–42–3), potassium perfluoropropanoate (CASRN 378–76–7), sodium perfluoropropanoate (CASRN 378–77–8), perfluoropropanoyl chloride (422–59–3), and perfluoropropanoyl fluoride (CASRN 422–61–7). In July 2023, EPA finalized a human health toxicity value for PFPrA (Ref. 41). Accordingly, PFPrA is automatically added to the TRI chemical list as of January 1, 2024, pursuant to the NDAA section 7321(c)(1)(A)(i). EPA is now proposing to list PFPrA and its associated salts and acyl halides and anhydride as a single TRI category, as the salts (including non-metal and alkali metal salts) would be expected to dissociate in aqueous solutions and the acyl halides and anhydride would be expected to be converted to PFPrA in aqueous solutions. Therefore, the toxicity concerns for PFPrA apply to all members in this category.

a. *Human health hazard assessment.* In a 28-day oral study in rats, increased relative liver weight was observed in males at ≥ 20 mg/kg-d, accompanied by hepatocyte lesions (primarily hypertrophy with some evidence of slight focal necrosis) and serum markers

of hepatocellular/hepatobiliary injury (i.e., increased ALT, ALP) at ≥ 80 mg/kg-d. Despite the lack of additional oral repeat-dose studies examining liver effects of PFPrA by which to evaluate similarity of results, this profile of PFPrA-induced liver effects is consistent with the liver toxicity observed in experimental rodents following oral exposure to perfluorobutanoic acid, a closely related linear short-chain (4-carbon) perfluorocarboxylic acid (Ref. 41).

The PFPrA toxicity assessment derived a chronic RfD of 1×10^{-4} mg/kg-day based on liver effects (Ref. 41).

b. *Conclusion.* EPA believes there is sufficient evidence to list the PFPrA, Salts, Acyl halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible liver toxicity.

15. Perfluoroundecanoic Acid (PFUnA) (CASRN 2058–94–8), Salts, Acyl Halides, and Anhydride Category

This category would include all associated salts and acyl halides including: ammonium perfluoroundecanoate (CASRN 4234–23–5), potassium perfluoroundecanoate (CASRN 30377–53–8), sodium perfluoroundecanoate (CASRN 60871–96–7), calcium perfluoroundecanoate (CASRN 97163–17–2), and perfluoroundecanoic anhydride (CASRN 942199–03–3). EPA found evidence of both serious or irreversible human health effects and environmental effects due to PFUnA and its salts. EPA is proposing to list PFUnA and its associated salts and acyl halides as a single TRI category, as the salts would be expected to dissociate in aqueous solutions and the acyl halides would be expected to be converted to PFUnA in aqueous solutions. Therefore, the toxicity concerns for PFUnA apply to all members in this category.

a. *Human health hazard assessment.* In a combined repeat-dose oral toxicity study with a reproductive/developmental screening test, rats were exposed to PFUnA at daily doses of 0.1, 0.3, or 1.0 mg/kg-day; the study was conducted consistent with OECD 422 protocol. Following PFUnA exposure for 41–46 days, indicators of toxicity were observed in the liver, kidney, and spleen of adult male and female rats. Statistically significant increases in absolute and relative liver weights and histopathological evidence of altered tissue architecture (e.g., hepatocellular hypertrophy) were observed in male (≥ 0.3 mg/kg-day) and female (1.0 mg/kg-day) rats. Serum enzymes indicative of hepatocellular (e.g., ALT) and biliary epithelial (e.g., ALP) injury were also

observed immediately after cessation of exposure but only in males at the high dose of 1.0 mg/kg-day. A statistically significant increase in a blood biomarker indicative of kidney injury (*i.e.*, BUN) was also observed in male and female rats at 1.0 mg/kg-day. The spleen was also adversely affected by oral PFUnA exposure, as statistically significant decreased absolute and relative organ weights were observed in male and female rats at 1.0 mg/kg-day. Developmental effects entailed statistically significant decreases in the body weight of male and female offspring, on PNDs 0 and 4, in litters of the high dose rats. Based on systemic organ toxicities in adults and body weight decrements in offspring, a study NOAEL of 0.3 mg/kg-day and LOAEL of 1.0 mg/kg-day were identified (Ref. 42).

The pattern of liver effects seen for PFUnA in the OECD 422 study are consistent with those seen for other, more well-characterized PFAS. Specifically, the RfDs for GenX and PFBA are based on the same liver foci (*e.g.*, increased organ weights; liver hypertrophy and associated pathological lesions), as described for PFUnA exposure by Takahashi *et al.* (2014) (Ref. 43).

b. **Conclusion.** EPA believes there is sufficient evidence to list the PFDoA, Salts, Acyl Halides, and Anhydride category on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV), for serious or irreversible liver, kidney, spleen, and developmental outcomes.

C. What are the proposed individual chemicals?

The following chemicals are being proposed as individually listed additions to the TRI list (*i.e.*, EPA did not identify known, associated salts for purposes of this proposed listing) and reason for inclusion:

- Broflanilide (CASRN 1207727-04-5), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health) and 313(d)(2)(C) (Effect on the Environment);
- 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl- (MeFBSA) (CASRN 68298-12-4), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);
- 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methyl- (MeFBSE) (CASRN 34454-97-2), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);
- Cyclopentene, 1,3,3,4,4,5,5-heptafluoro- (HFCPE) (CASRN 1892-03-1), which is based on EPCRA 313(d)(2)(C) (Effect on the Environment);

- Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]-, lithium salt (CASRN 132843-44-8), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);
- 6:2 Fluorotelomer alcohol (6:2 FTOH) (CASRN 647-42-7), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);
- Fulvestrant (CASRN 129453-61-8), which is based on EPCRA 313(d)(2)(C) (Effect on the Environment);
- Hexaflumuron (CASRN 86479-06-3), which is based on EPCRA 313(d)(2)(C) (Effect on the Environment);
- Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- (CASRN 132182-92-4), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);
- Perfluorotridecanoic acid (PFTTrDA) (CASRN 72629-94-8), which is based on EPCRA 313(d)(2)(C) (Effect on the Environment);
- Perfluoro(2-ethoxy-2-fluoroethoxy) acetic acid ammonium salt (EEA-NH₄) (CASRN 908020-52-0), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);
- 2-Propenoic acid, 2-[methyl] (nonafluorobutyl)sulfonyl]amino]ethyl ester (MeFBSEA) (CASRN 67584-55-8), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);
- Pyrfluquinazon (CASRN 337458-27-2), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health);
- Tetraconazole (CASRN 112281-77-3), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health) and 313(d)(2)(C) (Effect on the Environment);
- Triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tri-deca-fluorooctyl)silane (CASRN 51851-37-7), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health); and
- Trifluoro(trifluoromethyl) oxirane (HFPO) (CASRN 428-59-1), which is based on EPCRA 313(d)(2)(B) (Chronic Human Health).

The Agency has provided important endpoints in the following summary. For the full toxicological profile, please refer to the respective references.

1. Broflanilide (CASRN 1207727-04-5)

EPA has previously reviewed broflanilide as part of the pesticide registration process under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

a. **Human health hazard assessment.** The target organs of broflanilide toxicity are the adrenal glands (rats, mice, and dogs) and ovaries (rats and mice). Adrenal effects include increased adrenal weights, increased incidence of

adrenal cortex vacuolation and adrenal cortex hypertrophy in both sexes. Ovarian effects include increased incidence of ovarian interstitial gland vacuolation (Ref. 44).

For the Chronic Dietary Endpoint for the General Populations, A 2-generation reproductive toxicity study (MRID 50211379) was selected with a NOAEL of 3 mg/kg/day and a LOAEL of 8 mg/kg/day based on increased adrenal weights with corroborative histopathological findings (increased vacuolation and diffuse hypertrophy in the adrenal gland cortex) in both sexes and both generations. Although an apparent lower NOAEL (2 mg/kg/day) was identified for females in the chronic rat study, it was a reflection of dose selection. The selected POD of 3 mg/kg/day is still protective for the effects noted in the chronic rat study at the LOAEL of 7.1 mg/kg/day. An uncertainty factor of 100X (10X for interspecies extrapolation, 10X for intraspecies variation, and 1X for FQPA SF) is applied. The chronic reference dose (cRfD) and chronic population adjusted dose (cPAD) is 0.03 mg/kg/day (Ref. 44).

The Cancer Assessment Review Committee (CARC) classified broflanilide as “Likely to be Carcinogenic to Humans” based on Leydig cell tumors and all ovarian tumors combined (granulosa cell benign and malignant, luteomas, thecomas and sex cord stromal tumors). The unit risk, Q_1^* (mg/kg/day)⁻¹, of broflanilide based upon male rat testicular Leydig cell tumor rates is 2.48×10^{-3} in human equivalents (Ref. 44).

b. **Ecological hazard assessment.** Although there were no effects seen at the highest dose tested in acute daphnia (*Daphnia magna*) and eastern oyster (*Crassostrea virginica*) tests, an acute study with mysid resulted in a LC₅₀ of 0.0215 µg a.i./L, with a steep dose response (35%, 95% and 100% mortality at 0.0202, 0.0284, and 0.0428 µg a.i./L respectively). Based on the mysid data, broflanilide is classified as very highly toxic to aquatic estuarine marine invertebrates. In chronic studies, the *Daphnia* NOAEC of 5.93 µg a.i./L was based upon 6–8% reductions in length, total offspring, birth rate, and time to first brood at 11.6 µg a.i./L. The mysid study did not establish a definitive NOAEC endpoint because at the lowest test concentration, 0.0018 µg a.i./L, there was 17% reduced survival for F1 and 22% reduced offspring per female (Ref. 45).

Studies with freshwater species *Chironomus dilutus* and *Hyalalella azteca*, and the estuarine/marine species *Leptocheirus plumulosus* resulted in

LC₅₀s of 9.99, 13.5, and 14 µg ai/kg dry sediment. In a 28-day spiked sediment test with *Leptocheirus plumulosus*, the NOAEC was determined to be 3.8 µg ai/kg dry sediment based on 12% reduced survival at the LOAEC. Broflanilide is highly toxic to honeybees (*Apis mellifera*) and bumble bees (*Bombus terrestris*) on both an acute contact and oral exposure basis. In an acute (single dose) contact and acute oral combined toxicity study with adult honeybees (*Apis mellifera*), the 48-hr contact LD₅₀ = 0.0088 µg a.i./bee and acute oral LD₅₀ = 0.0149 µg a.i./bee (Ref. 45).

Broflanilide is persistent in terrestrial and aquatic environments. Broflanilide is stable to hydrolysis and soil photolysis and under anaerobic and aerobic conditions, and it persists in soil and water, with half-lives ranging from months to years (Ref. 45).

c. *Conclusion.* EPA believes there is sufficient evidence to list broflanilide pursuant to EPCRA section 313(d)(2)(B)(i) for cancer and (ii)(IV) for serious or irreversible chronic human health effects, as well as (d)(2)(C) for toxicity and persistence.

2. 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methyl- (MeFBSE) (CASRN 34454-97-2)

a. *Human health hazard assessment.* 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methyl- is also referred to by the synonym 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methyl-1-butanefluorobutanesulfonamide (MeFBSE). Hepatic effects observed after subchronic oral exposure in adult rats included elevated absolute and relative liver weight and hepatocellular hypertrophy in both sexes, and hepatocyte necrosis in male rats, at 250 mg/kg-day. Compared with the control group, at 250 mg/kg-day, ALT levels of treated female rats were increased 1.6-fold, and in male rats were increased 1.3-fold. The dose-dependent increases in organ weight, incidence of histopathological alterations (e.g., cellular hypertrophy and necrosis), and although not statistically significant, serum ALT, suggests liver injury following repeated exposure to MeFBSE. It should be noted that while these results suggest a dose-dependent progression of liver injury, the temporality of exposure duration is typically associated with increased incidence and/or severity of liver injury over time; however, longer duration studies to inform the influence of prolonged exposure on this liver injury profile are not available for MeFBSE (Ref. 46).

Renal changes were limited to increases in absolute and relative kidney weights in males at 50 and 250 mg/kg-day. (There was only increased relative kidney weight in high-dose females.) No histopathology or clinical chemistry parameters indicative of kidney injury were reported. The changes observed in the kidney were primarily observed in male rats and were limited to organ weight information; as such, in the absence of confirmatory histopathological and/or clinical chemistry evidence of renal injury, it is unclear if the observations in kidney weight are adverse (Ref. 46).

Oral MeFBSE exposure also induced effects in a reproduction/developmental screening test in rats (performed in accordance with the OECD Test No: 422). MeFBSE caused significant decreases in livebirth and viability indices for pups, and the average number of pups/litter surviving to PND 5 were decreased at 250 mg/kg-day maternal dose (Ref. 46).

b. *Conclusion.* EPA believes there is sufficient evidence to list MeFBSE on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) based on serious or irreversible liver toxicity and developmental toxicity for this chemical.

3. 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl- (MeFBSA) (CASRN 68298-12-4)

a. *Human health hazard assessment.* 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl- is also referred to by the synonym N-(methyl)nonafluorobutanesulfonamide (MeFBSA). The single repeated-dose oral toxicity study with reproductive/developmental screen in rats showed decreased conception rate in female rats with corresponding decreases in fertility and gestation indices, increased postnatal loss and decreased viability index of pups, and decreases in pup weight and increases in the incidence of small pups during lactation. Given that there is a dose-response relationship with statistically significant changes compared to control rats for the viability index (Ref. 47), the NOAEL is n.d. and the LOAEL is 50 mg/kg-day for reproductive/developmental effects. However, there is uncertainty in the assignment of a LOAEL of 50 mg/kg-day for post-natal loss and decreased viability since single litter losses contribute to the postnatal loss values. In summary, the available literature provides evidence that MeFBSA can be reasonably anticipated to cause serious or irreversible reproductive and developmental toxicity in humans (Ref. 47).

b. *Conclusion.* EPA believes there is sufficient evidence to list MeFBSA on the TRI pursuant to EPCRA section 313(d)(2)(B) for serious or irreversible reproductive and developmental toxicity.

4. Cyclopentene, 1,3,3,4,4,5,5-heptafluoro (HFCPE; CASRN 1892-03-1)

a. *Ecological hazard assessment.* The experimental data for HFCPE from aquatic toxicity studies includes acute toxicity endpoint values as low as of 0.19 mg/L in freshwater fish (96-hour LC₅₀ in *Oryzias latipes*), 0.26 mg/L in aquatic invertebrates (48-hour EC₅₀ for immobilization of *Daphnia magna*), and 0.9 mg/L in algae (72-hour EC₅₀ for decreased growth rate in *Pseudokirchneriella subcapitata*) (Ref. 48).

b. *Conclusion.* EPA believes there is sufficient evidence to list HFCPE on the TRI pursuant to EPCRA section 313(d)(2)(C)(i) for environmental toxicity.

5. Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]-, Lithium Salt (CASRN 132843-44-8)

a. *Human health hazard assessment.* The available toxicity data for ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]-, lithium salt (CASRN 132843-44-8) (also referred to by the synonym lithium bis[(pentafluoroethyl)sulfonyl]azanide), obtained from an unpublished 28-day oral rat study, are limited but provide evidence that the liver is a sensitive target organ. The mid dose of 2 mg/kg-day was identified as a LOAEL based on hepatic effects, including increases in liver weight, serum chemistry changes associated with hepatotoxicity [e.g., alanine aminotransferase (ALT) and alkaline phosphatase (ALP)], increased incidence and severity of hepatocellular hypertrophy in both sexes, and increased incidence of focal necrosis of hepatocytes in male rats (Ref. 49).

b. *Conclusion.* EPA believes there is sufficient evidence to list ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]-, lithium salt on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible chronic human health effects (hepatotoxicity).

6. 6:2 Fluorotelomer Alcohol (6:2 FTOH) (CASRN 647-42-7)

a. *Human health hazard assessment.* Histopathological changes in the liver and kidney were reported in two

subchronic rat and mouse feeding studies following exposure to 6:2 FTOH in the diet. The liver changes included elevated organ weight and/or hepatocellular hypertrophy (and in some studies, other hepatic lesions such as oval cell hyperplasia, cystic degeneration, and single cell necrosis). These alterations were observed in rats at ≥ 25 mg/kg-day and in mice at ≥ 5 mg/kg-day. In addition, the elevated clinical chemistry parameters indicative of hepatocellular injury are greater in females than males at the highest test concentrations (100 mg/kg/day and 250 mg/kg/day, for mice and rats, respectively) of 6:2 FTOH. In mice, hepatic clinical chemistry values, including serum ALT and AST were significantly increased at 100 mg/kg-day 6:2 FTOH in F0 males (2.5 to 5-fold) and F0 females (>5 -fold). Significant increments (compared with the control groups) were also observed in the 6:2 FTOH treated rat serum ALT (+57% increase in male rats at 125 mg/kg-day) and GGT (+188% increase in female rats and +57% increase in male rats at 125 mg/kg-day) levels. The additional target organ of 6:2 FTOH toxicity was the kidney in both rats and mice, with effects observed at ≥ 25 mg/kg bw-day in rats and 100 mg/kg bw-day in mice. At high doses of 6:2 FTOH, effects on the kidney were severe in rats, and identified as a cause of mortality in multiple studies (Ref. 50).

b. *Conclusion.* EPA believes there is sufficient evidence to list 6:2 FTOH on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible chronic health effects (hepatotoxicity and nephrotoxicity).

7. Fulvestrant (CASRN 129453–61–8)

Fulvestrant is also referred to by the synonym (7alpha,17beta)-7-[9-[(4,4,5,5,5-pentafluoropentyl)sulfinyl]nonyl]estra-1,3,5(10)-triene-3,17-diol.

a. *Ecological hazard assessment.* As described in Unit II.B., EPA is exploring additional means for identifying chemicals as candidates for TRI listing. ECOTOX data describes environmental effects for fulvestrant (CASRN 129453–61–8) (Ref. 51). In *Daphnia magna* exposed to fulvestrant, mortality was observed at 0.129 mg/L (mean LC_{50}) after a 96-h exposure, and statistically significant reproductive effects of reduced brood size were observed at a lowest effect concentration of 0.001 mg/L in chronic tests (Ref. 52). Statistically significant abnormal development (defined as missing anatomical features, deformities, and incomplete gut development) was observed in sea urchin larvae, *Strongylocentrotus*

purpuratus, exposed to fulvestrant both alone (EC_{50} value of 0.000058 mg/L), as well as in co-incubation experiments with endocrine disrupting compounds (EDCs) resulting in increased developmental abnormalities by 10–20% (lowest effect concentration of 0.00003 mg/L) (Ref. 53). In mature male Atlantic croakers (*Micropogonias undulatus*), exposure to fulvestrant was observed to inhibit production of a predominant androgen, 11-ketotestosterone in *in vitro* cell cultures by functioning as an estrogen agonist when binding to the testicular estrogen membrane receptor at 0.055 mg/L (mean EC_{50}) (Ref. 54).

b. *Conclusion.* EPA believes there is sufficient evidence to list fulvestrant on the TRI pursuant to EPCRA section 313(d)(2)(C)(i) for environmental toxicity.

8. Hexaflumuron (CASRN 86479–06–3)

a. *Ecological hazard assessment.* Hexaflumuron is very highly toxic to aquatic invertebrates, but not terrestrial invertebrates, birds, and mammals, on an acute exposure basis. In particular, hexaflumuron is very highly toxic to water flea (*Daphnia magna*), with a 48 hour LC_{50} of 0.111 μ g ai./L (Ref. 55).

On a chronic exposure basis, hexaflumuron resulted in reduced survival in birds (mallard duck and bobwhite quail) and reduced growth (pup body weights) in rats. In a 2-generation reproduction study with the rat (*Rattus norvegicus*), no adverse, treatment-related effects were observed on adult (parental) mortality, clinical signs, body weight, body weight gain, food consumption, hematology, organ weights, or gross or histological pathology throughout the study in either generation. However, the LOAEL for offspring toxicity was observed based on decreased pup body weights at 125 mg/kg bw/day dose level; the NOAEL was 25 mg/kg bw/day. In an avian reproduction toxicity study with mallard ducks (*Anas platyrhynchos*), the NOAEC was 29.4 mg ai./kg-diet (mean-measured) and the LOAEC was 96.5 mg ai./kg-diet (mean-measured) based on reduced survival (*i.e.*, reduced numbers of viable embryos and hatchling survival) and reduced growth (*i.e.*, hatchling body weights) (Ref. 55).

b. *Conclusion.* EPA believes there is sufficient evidence to list hexaflumuron on the TRI pursuant to EPCRA section 313(d)(2)(C)(i) for environmental toxicity.

9. Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- (CASRN 132182–92–4)

a. *Human health hazard assessment.*

The repeated exposure hazard studies for pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- (CASRN 132182–92–4), referred to by the synonym 3-methoxyperfluoro(2-methylpentane), are limited to one 28-day oral rat study and a single generation reproductive/developmental study in rats via the inhalation route. Following oral exposure, the liver appears to be the most sensitive target organ. Gross enlargement and increased absolute and relative liver weights were statistically significantly increased in male rats at ≥ 150 mg/kg-day, compared to control; increased liver weights in females were also observed but only at the high dose (1,000 mg/kg-day). Increased liver weight was accompanied by histopathological evidence of structural alteration (*e.g.*, centrilobular hepatocellular hypertrophy) in male rats at ≥ 150 mg/kg-day. Focal hepatocellular necrosis was also observed but only at the high dose (1,000 mg/kg-day). Based on findings of liver alterations in male rats, a LOAEL of 150 mg/kg-day and corresponding NOAEL of 25 mg/kg-day, are identified for oral 3-methoxyperfluoro(2-methylpentane) exposure (Ref. 56).

Increased liver weights were also noted at $\geq 72,250$ mg/m³ in F0 male rats of a single generation reproductive/developmental inhalation study; however, due to poor results reporting in the source ECHA study summary, incidence and/or magnitude of this effect was not discernable. Diffuse hepatocellular hypertrophy was also reported in the livers of these same male rats but again, incidence and magnitude of effect were not reported. Importantly, no evidence of statistically significant reproductive or developmental toxicity was reported in the F0 or F1 rats up to the highest inhalation concentration tested (281,700 mg/m³). Due to the lack of quantitative data provided in the source ECHA study summary, no LOAEC or NOAEC values were identified for the inhalation route of exposure (Ref. 56).

b. *Conclusion.* EPA believes there is sufficient evidence to list pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible chronic health effects (hepatotoxicity).

10. Perfluorotridecanoic Acid (PFTrDA) (CASRN 72629–94–8)

a. *Ecological hazard assessment.* The available aquatic toxicity data for perfluorotridecanoic acid (PFTrDA) (CASRN 72629–94–8) suggest high concern for hazard upon acute exposure of aquatic organisms to this chemical. Based on a 120-day fish study, a NOEC of 0.01 mg/L and LOEC of 0.1 mg/L (MATC = 0.03 mg/L) were identified in zebrafish for significantly ($p < 0.05$) reduced survival into adulthood. In addition, based on a 48-hour EC_{50} of 8.2 mg/L for immobility in *D. magna*, PFTrDA can cause adverse aquatic effects. The MATC of 0.03 mg/L and EC_{50} of 8.2 mg/L were obtained based on nominal concentrations in a study that did not use solvent, and a MATC of 0.03 mg/L indicates a high concern for hazard to zebrafish upon chronic exposure to PFTrDA. It is likely that actual exposure levels were lower than nominal, and that the resulting MATC is lower as well (Ref. 57).

There is substantive evidence that PFTrDA has the potential to bioaccumulate in organisms. Laboratory and field-derived BCF and BAF values, respectively, suggest PFTrDA has a high potential to bioaccumulate in aquatic species (e.g., BCF = 10,233 – 45,709 L/kg in zebrafish; root concentration factor (RCF) = 1,430 – 2,590 in aquatic plants; BAF = 19,953 – 31,623 L/kg in black-spotted frogs). Field studies also show that PFTrDA can biomagnify through the food chain (trophic magnification factor (TMF) = 3.54 – 4.78 at various sites in China and 0.9 – 14.9 at sites in France). However, there is no measured environmental half-life data for PFTrDA and the derived data via model predictions are unreliable for the chemical (Ref. 57).

b. *Conclusion.* The Agency believes there is sufficient data to list PFTrDA on the TRI pursuant to EPCRA section 313(d)(2)(C)(iii) for environmental toxicity and bioaccumulation.

11. Perfluoro(2-ethoxy-2-fluoroethoxy)acetic Acid Ammonium Salt (EEA–NH₄) (CASRN 908020–52–0)

a. *Human health hazard assessment.* Perfluoro(2-ethoxy-2-fluoroethoxy)acetic acid ammonium salt is also referred to by the synonym perfluoro[(2-pentafluoroethoxy ethoxy)acetic acid] ammonium salt (EEA–NH₄).

An article by Rice *et al.* (Ref. 58) summarized the findings of two unpublished studies conducted by Asahi Glass. These studies were reported to follow OECD 407 and OECD 421 protocols designed to evaluate potential adverse health effects

associated with repeated-dose (28-days) or reproduction and development in rats, respectively. After 28-days of oral EEA–NH₄ exposure, increased liver weights, hepatocellular hypertrophy, and increased kidney weight parameters were noted in male rats. For females, hepatocellular necrosis and renal tubule hyperplasia were observed. In the reproductive/developmental screening study, decreased body weight gains in parents and decreased body weight in pups, as well as decreased viability indices in pups were observed (Ref. 59).

In the 28-day (OECD 407) study, a LOAEL of 5 mg/kg/day was observed due to renal tubule basophilia in females. In males, increased liver and kidney weights were observed at 25 mg/kg/day. The study also observed other liver effects in male rodents at 100 mg/kg/day, including increased serum albumin to globulin ratio, increased alanine aminotransferase, decreased serum cholesterol, and hepatocellular hypertrophy. Decreased bilirubin and focal hepatocellular necrosis were noted in females at 100 mg/kg/day. Both sexes saw enlarged/squamous hyperplasia of the limiting ridge of the stomach at 100 mg/kg/day (Ref. 59).

In the OECD 421 study, the LOAEL was determined to be 30 mg/kg/day based on decreased body weight at PND 0 and 4 for both sexes of the F1 generation. At PND 6, decreased body weight was observed in male pups only at 90 mg/kg/day. Also, at 90 mg/kg/day, decreased birth index, increased total dead pups, and decreased total live pups/litter were observed. Adverse maternal reproductive effects included decreased body weight gain and feed consumption on Lactation Day (LD) 1–6 at 90 mg/kg/day (although mortality was also observed at 90 mg/kg/day) (Ref. 59).

b. *Conclusion.* EPA believes there is sufficient evidence to list EEA–NH₄ on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(I) for serious or irreversible reproductive dysfunctions and (IV) other chronic health effects.

12. 2-Propenoic Acid, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl Ester (MeFBSEA) (CASRN 67584–55–8)

a. *Human health hazard assessment.* Data on MeFBSEA (referred to by the synonym 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate (MeFBSEA)) toxicity are limited to two unpublished oral toxicity studies in rats: a single 13-week oral repeat-dose study and a prenatal developmental toxicity study. Based on the available data showing organ weight, histopathological, and supporting serum

chemistry changes, the liver and kidneys appear to be the most sensitive targets of toxicity. Elevated liver weights and histopathological changes were observed with increasing severity in male rats at ≥ 100 mg/kg-day and in female rats at ≥ 300 mg/kg-day. Measures of altered hepatic clinical chemistry were observed in both sexes at ≥ 300 mg/kg-day. At the high dose of 703 mg/kg-day, several animals died early, which the study authors attributed primarily to severe liver necrosis. Kidney weights were increased in both sexes at ≥ 100 mg/kg-day, and vacuolar degeneration and necrosis in the kidney were identified as contributing to early death in some rats. Effects of MeFBSEA in other tissues (urinary bladder, thyroid, adrenal gland) were mild and occurred primarily at high doses associated with overt clinical signs of toxicity and early mortality. In the developing fetus, decreased fetal body weights and increased skeletal variations were seen at doses ≥ 300 mg/kg-day in association with decreased maternal body weight (Ref. 60).

An additional potential target of toxicity is the urinary bladder in rats. Male rats dosed with 300 mg/kg-day demonstrated statistically significant reductions in mean body weights on Days 57 through 71 (–8 to –9%) and on Day 91 (–8%) (Ref. 60).

The liver effects (e.g., hepatocellular hypertrophy, and gross enlargement of the liver) were observed in both male and female rats at 100 and 300 mg/kg/day, respectively (LOAEL = 100 mg/kg/day). Statistically significant increases in serum alanine aminotransferase (ALT) levels (+47%, 1.5-fold increment in comparison with the respective control value) in female and male rat (+73%, 1.6-fold increment in comparison with the respective control value), and statistically significant elevation of serum ALP level (+48%, 1.5-fold) in male rat were observed at 300 mg/kg/day. Additionally, coagulative necrosis in male rat liver and centrilobular necrosis in female rat liver were observed at 300 mg/kg/day. The microscopic histopathology findings correlated with concurrent and expected changes in serum clinical chemistry parameters and the severity of toxicity also reflected dose-related reductions in animal body weights over the dosing phase of this study at the highest test concentrations (1000/600 mg/kg/day) (Ref. 60).

Increased kidney weights were observed in both sexes of treated rat at ≥ 100 mg/kg-day.

Vacuolar degeneration/necrosis, granular casts, increased severity of tubular basophilia were observed in the

kidney of both sexes starting at 300 mg/kg/day of the test substance. Urinary bladder effects (hypertrophy/hyperplasia of the urothelium) of both sexes were also observed starting at 300 mg/kg/day (Ref. 60).

Under the treatment conditions, developmental effects following *in utero* exposure to MeFBSEA observed in the fetus included decreased fetal body weights and increased skeletal variations at doses ≥ 300 mg/kg-day (LOAEL) in association with decreased maternal body weight (Ref. 60).

b. *Conclusion.* EPA believes there is sufficient evidence to list MeFBSEA on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible chronic health effects (hepatotoxicity, renal toxicity, and urinary bladder damage).

13. Pyrifluquinazon (CASRN 337458–27–2)

a. *Human health hazard assessment.* The Agency has provided important endpoints in the following summary. For the full toxicological profile, please refer to the respective reference (a 2018 EPA human health risk assessment for proposed uses of pyrifluquinazon (Ref. 61)). In a carcinogenicity test in mice, the LOAEL was found to be 27.1/25.0 mg/kg/day [M/F] based on decreased mean body weight in males, increased incidences of tactile hair loss in males, endometrial hyperplasia of the uterine horn in females, follicular cell hypertrophy of the thyroid in males, and subcapsular cell hyperplasia of the adrenal in males. Using an uncertainty factor of 10X, the cPAD was calculated to be 0.06 mg/kg/day (Ref. 61).

In a two-generation developmental and reproductive toxicity study in rats, the developmental LOAEL was 10 mg/kg/day based on decreased anogenital distance (AGD) in males, increased incidences of skeletal variations (total), and increased incidences of supernumerary ribs. The offspring LOAEL was 10.2 mg/kg/day based on decreased body weight in F2 female pups (Ref. 61).

In a 28-day inhalation toxicity study in rats, the portal of entry LOAEL was 0.15 mg/L based on an increased incidence of terminal airway inflammation in males. The systemic LOAEL was 0.15 mg/L based on clinical signs including piloerection and splayed gait, decreased body-weight gains in both sexes, decreased platelet diameter widths in males, as well as increased incidence of centrilobular hepatocyte hypertrophy in both sexes (Ref. 61).

b. *Conclusion.* EPA believes there is sufficient evidence to list

pyrifluquinazon on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(I) and (IV) for serious or irreversible: reproductive dysfunctions and other chronic human health effects.

14. Tetraconazole (CASRN 112281–77–3)

a. *Human health hazard assessment.*

The liver and kidney are the target organs of tetraconazole toxicity in oral toxicity studies in dogs and mice following subchronic and chronic durations: In a 90-day oral toxicity study in mice, single liver cell degeneration in males; and increased serum glutamic pyruvic transaminase (SGPT) and serum glutamic oxaloacetic transaminase (SGOT), decreased BUN levels, increased absolute and relative liver weights and presence hepatocellular single cell necrosis in females were seen at the LOAEL of 16/20 mg/kg/day. In a chronic toxicity study in dogs, increases in liver weight and kidney weight, histopathological changes in the liver and kidney, and increases in alkaline phosphatase, γ -glutamyltransferase, alanine aminotransferase and ornithine carbamoyl transferase levels in both sexes, increased cholesterol in the male, decreased albumin in both sexes, proteinuria and decreased absolute terminal body weight in females were seen at the LOAEL of 12.97/14.5 (M/F) mg/kg/day. Inhalation exposure of rats to tetraconazole to resulted in portal-of-entry effects (squamous cell metaplasia of laryngeal mucosa and mononuclear cell infiltration) and systemic effects (follicular cell hypertrophy of thyroid). The inhalation no-observed-adverse-effect concentration (NOAEC) is established at 0.159 mg/L and lowest-observed-adverse-effect concentration (LOAEC) is 0.520 mg/L based on increased severity of the squamous cell metaplasia of laryngeal mucosa (minimal to slight), slight increase in severity of mononuclear cell infiltration, minimal epithelial erosion in the larynx, slight increase in the lung weights, and increased white blood cell counts. The systemic NOAEC is established at 0.0548 mg/L and LOAEC is 0.159 mg/L based on increased severity (minimal to slight) of thyroid follicular cell hypertrophy in males (Ref. 62).

In the developmental rat study, an increased incidence of supernumerary ribs (associated with 7th cervical vertebrae) was noted in the absence of maternal effects (developmental LOAEL = 100 mg/kg/day). In the two-generation reproduction toxicity study in rats, decreased litter and mean pup body weights were noted in offspring at the same dose that caused decreased body

weights, dystocia, and mortality in adult females (offspring, reproductive, and parental/systemic LOAEL at the highest dose of 35.5/40.6 (M/F) mg/kg/day). Effects in parental animals that survived the duration of the study were consistent with other studies, such as decreased body weight, increased kidney weight, increased liver weight, and hepatocyte enlargement (Ref. 62).

The two-generation reproduction study in rats was selected for the chronic dietary endpoint for the general population. An uncertainty factor of 100 (10X for interspecies extrapolation, a 10X for intraspecies variability, and a 1X Food Quality PA Safety Act safety factor) was applied to the NOAEL of 6 mg/kg/day to generate the cPAD of 0.06 mg/kg/day. The LOAEL is 35.5 mg/kg/day based on decreased litter weight and mean pup weight in litters of all generations before weaning and decreased mean litter size and number of pups in the F1A generation. It is protective of the effects observed in the chronic studies in mice, rats, and dogs, as well as the fetal effect observed in the developmental study in rats (Ref. 62).

b. *Ecological hazard assessment.*

Tetraconazole poses risk to terrestrial vertebrate and invertebrate taxa (primarily mortality, growth or reproduction effects from chronic exposure).

Chronic exposure of birds resulted in 7.48% and 15.9% reductions in 14-day old weight and survival, respectively. In a 2-generation reproduction study in rats, there was a 9% increase in mortality and a 2% increase in gestation times at the LOAEL of 5.9 mg a.i./kg-bw/day (females) (Ref. 63).

Available acute toxicity data for fish indicate that tetraconazole is moderately toxic to the freshwater Bluegill Sunfish (*Lepomis macrochirus*; LC50=3,850 μ g a.i./L) and the estuarine/marine Sheepshead Minnow (*Cyprinodon variegatus*; LC50>3,400 μ g a.i./L) on an acute exposure basis (Ref. 63).

In a chronic two-generation life cycle test (MRID 50485802) with the freshwater Zebra Fish (*Danio rerio*), the NOAEC was 80 μ g a.i./L above which there was a statistically significant ($p < 0.05$) shift in sex ratio (*i.e.*, 21.1% increase in the number of males and a 25.1% reduction females) compared to controls at the LOAEC of 207 μ g a.i./L. A chronic early life stage toxicity test with the estuarine/marine *C. variegatus* resulted in a NOAEC of 120 μ g a.i./L above which there were 3.2% and 10.8% reductions in body length and dry weight, respectively, at the LOAEC of 240 μ g a.i./L (Ref. 63).

Tetraconazole is moderately toxic to the freshwater invertebrate waterflea

(*Daphnia magna*; $EC_{50}=2,360 \mu\text{g a.i./L}$) and highly toxic to the estuarine/marine invertebrate mysid shrimp (*Americamysis bahia*; $LC_{50}=440 \mu\text{g a.i./L}$) on an acute exposure basis. A chronic toxicity study of the *D. magna* resulted in a $NOAEC = 190 \mu\text{g a.i./L}$ above which there was a 20.9% reduction in reproduction in comparison to the control at a $LOAEC$ of $209 \mu\text{g a.i./L}$. A chronic toxicity study with *A. bahia* resulted in a $NOAEC$ of $87 \mu\text{g a.i./L}$ above which there was a 21% increase in the time to first brood, a 39% reduction in the number of young per female, and 10% decrease in male dry weight in comparison to the control at a $LOAEC$ of $180 \mu\text{g a.i./L}$ (Ref. 63).

Tetraconazole is expected to be persistent in aquatic and soil environments and does not have a predominant route of dissipation. Tetraconazole is stable to hydrolysis and aerobic soil degradation. The aerobic aquatic half-lives ranged from 320 to 382 days. Tetraconazole field dissipation half-lives ranged from 91 to 800 days. Tetraconazole is stable to anaerobic aquatic metabolism with half-lives greater than the experimental period tested ($t_{1/2} \sim 8,123$ days) (Ref. 63).

c. *Conclusion.* In conclusion, EPA believes there is sufficient evidence to list tetraconazole on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii) for serious or irreversible reproductive dysfunctions and other chronic health effects; as well as 313(d)(2)(C)(ii) for environmental toxicity and persistence.

15. Triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silane (CAS 51851-37-7)

a. *Human health hazard assessment.* Valid available toxicity data are limited to one repeat-dose oral study with a reproductive/developmental screen (OECD 422 guideline), a subchronic study for which EPA only has access to the industry summary(-ies) via ECHA database dossiers. The high dose tested was 128 mg/kg-day time weighted average (TWA) (initially 150 mg/kg-day was tested and this was reduced to 125 mg/kg-day for the remainder of the study due to profound toxicity at 150 mg/kg-day in the first 1–2 weeks of exposure), the medium dose was 100 mg/kg-day, and the low dose was 50 mg/kg-day. The most sensitive toxicity target appears to be the peripheral nervous system. Clinical signs at ≥ 100 mg/kg-day included impaired neuromuscular function: ataxia, paresis, hypotonia, and reductions in reflexes, positional passivity, visual placing, grip strength, and sensitivity to pinching the tail. Histological evaluation showed progressive polyneuropathy in the

peripheral nerves and associated myofiber atrophy/degeneration of skeletal muscles at ≥ 100 mg/kg-day (LOAEL). The authors of the study summary considered peripheral nerve polyneuropathy a contributing or primary cause of moribundity in 17/21 rats that were sacrificed moribund in the medium- and high-dose groups. In surviving animals from the high-dose group, neurological effects (clinical signs and polyneuropathy) persisted after a 14- to 16-day recovery period. No clinical signs of neurotoxicity or peripheral nerve damage were reported at 50 mg/kg-day (NOAEL). In summaries of acute duration studies, no apparent clinical signs of neurotoxicity were reported following oral or dermal exposure to 2,000 mg/kg (Ref. 64).

No direct effects were seen on reproductive viability, as based on gonadal cell observations, fertility rate, or pup health (up to sacrifice on PND 4) in any of the groups; however, the copulation rate was drastically reduced to 43% at the high dose of 128 mg/kg-day. This was due to the high mortality prior to mating, neuromuscular impairments in surviving rats that impacted mating success, and low survival of high-dose dams. Reproductive indices for the medium-dose group were similar to controls (therefore the $NOAEL = 100$ mg/kg-day). Due to the high mortality of the high-dose group mentioned previously, a LOAEL for reproductive/developmental toxicity could not be determined (Ref. 64).

In the lungs, increases in subacute perivascularitis and interstitial edema in the high dose group (TWA of 128 mg/kg-day) were considered a contributing cause of moribundity in 5/21 rats. Hepatocellular hypertrophy and minimal-to-slight hepatocellular necrosis were observed in a few rats (as reported by the summary authors) that were sacrificed moribund in the medium and high dose groups (≥ 100 mg/kg-day). Diffuse hypertrophy of the zona fasciculata in the adrenal cortex was associated with moribundity in rats in the medium and high dose groups (≥ 100 mg/kg-day). Increases in thymic atrophy were also associated with moribundity in the high dose group (Ref. 64).

By the end of the 54-day study, half of the rats in the high-dose group had died. The 22 decedent rats from the medium- and high-dose groups were euthanized spanning Days 11 to 30. Exposed rats showed increased mortality in males, severe clinical signs of neurotoxicity (e.g., ataxia, hypotonia, and paresis; occurred in both sexes but earlier in males than in females),

decreased maternal body weight and body weight gain, and progressive polyneuropathy in both sexes (Ref. 64).

b. *Conclusion.* EPA believes there is sufficient evidence to list triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silane on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii)(IV) for serious or irreversible chronic health effects.

16. Trifluoro(trifluoromethyl) Oxirane (HFPO) (CASRN 428-59-1)

a. *Human health hazard assessment.*

The most reliable study for HFPO is a subchronic inhalation exposure study with reproductive screen in rats (OECD 422). Due to increased relative brain weight and corresponding brain lesions (neural necrosis and degeneration of neuronal fibers) in both sexes after exposure, HFPO is considered neurotoxic at $\geq 1,700$ mg/m³ (Ref. 65). An independent analysis of this chemical via a TSCA section 4 test order confirmed the same findings regarding the literature and toxic endpoints of HFPO: "In particular, available data from an OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test in rats showed severe neurotoxicity, including vacuolization and/or necrosis of brain neuronal cells". The test order authors ranked this study as high confidence in the quality review of all health outcome endpoints (Ref. 66). Further, due to significant decreases in pup body weight in mid (1,700 mg/m³)- and high (TWA 3,660 mg/m³)-exposure groups in the same study, HFPO is expected to be a developmental toxicant. Note that a decrease in pup body weight was observed at the lowest concentration of 340 mg/m³ parental exposure, but the decrease was not statistically significant (Ref. 65). The test order corroborates findings of reproductive and developmental toxicity in the OECD 422 study.

b. *Conclusion.* EPA believes there is sufficient evidence to list HFPO on the TRI pursuant to EPCRA section 313(d)(2)(B)(ii) and (iv) for serious or irreversible nervous system and developmental toxicity endpoints.

IV. Chemicals on the TRI List Are Being Reclassified as Chemical Categories

As explained in Unit II.B., EPA is proposing to reclassify certain individually listed chemicals as chemical categories. Specifically, EPA is proposing to remove the following individually listed chemicals from the TRI as they are included in chemical categories being proposed for listing (each is listed under the applicable category being proposed).

Hexafluoropropylene oxide dimer acid (HFPO-DA), Salts, and Acyl Halides Category:

- Hexafluoropropylene oxide dimer acid (HFPO-DA, GenX) (CASRN 13252-13-6);

- Hexafluoropropylene oxide dimer acid ammonium salt (CASRN 62037-80-3);

- Perfluorobutanesulfonic acid (PFBS), Salts, Sulfonyl Halides, and Anhydride Category;

- Perfluorobutanesulfonate (CASRN 45187-15-3);

- Perfluorobutanesulfonic acid (PFBS) (CASRN 375-73-5);

- Potassium perfluorobutane sulfonate (CASRN 29420-49-3);

- Perfluorobutanoic acid (PFBA), Salts, Acyl Halides, and Anhydride Category;

- Ammonium perfluorobutanoate (CASRN 10495-86-0);

- Perfluorobutanoate (CASRN 45048-62-2);

- Perfluorobutanoic acid (PFBA) (CASRN 375-22-4);

- Potassium heptafluorobutanoate (CASRN 2966-54-3);

- Sodium perfluorobutanoate (CASRN 2218-54-4);

- Perfluorodecanoic acid (PFDA), Salts, Acyl Halides, and Anhydride Category;

- Perfluorodecanoic acid (PFDA) (CASRN 335-76-2);

- Ammonium perfluorodecanoate (PFDA NH₄, CASRN 3108-42-7) (this chemical is not currently listed in the CFR, but pursuant to NDAA section 7321(c) this chemical will be on the TRI list with an effective date of January 1, 2025, in response to a July 2024 IRIS publication on PFDA; accordingly, EPA plans to update the CFR in 2025 to include this chemical).

- Sodium perfluorodecanoate (PFDA-Na, CASRN 3830-45-3) (this chemical is not currently listed in the CFR, but pursuant to NDAA section 7321(c) this chemical will be on the TRI list with an effective date of January 1, 2025, in response to a July 2024 IRIS publication on PFDA; accordingly, EPA plans to update the CFR in 2025 to include this chemical);

Perfluorododecanoic acid (PFDoA), Salts, Acyl Halides, and Anhydride Category:

- Perfluorododecanoic acid (PFDoA) (CASRN 307-55-1);

Perfluorohexanesulfonic acid (PFHxS), Salts, and Sulfonyl Halides, and Anhydride Category:

- Perfluorohexanesulfonic acid (PFHxS) (CASRN 355-46-4);

- 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, ammonium salt (CASRN 68259-08-5)

- 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. With 2,2'-iminobis[ethanol] (1:1) (CASRN 70225-16-0)

- 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, potassium salt (CASRN 3871-99-6)

- Perfluorononanoic acid (PFNA), Salts, Acyl Halides, and Anhydride Category:

- Perfluorononanoic acid (PFNA) (CASRN 375-95-1);

- Perfluorooctanesulfonic acid (PFOS), Salts, Sulfonyl Halides, and Anhydride Category:

- Lithium (perfluorooctane)sulfonate (CASRN 29457-72-5);

- Potassium perfluorooctanesulfonate (CASRN 2795-39-3);

- 1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ammonium salt (CASRN 29081-56-9);

- Ethanaminium, N,N,N-triethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic acid (1:1) (CASRN 56773-42-3);

- Perfluorooctylsulfonyl fluoride (CASRN 307-35-7);

- Perfluorooctanesulfonic acid (PFOS) (CASRN 1763-23-1);

- Perfluorooctanoic acid (PFOA), Salts, Acyl Halides, and Anhydride Category:

- Perfluorooctanoic acid (PFOA) (CASRN 335-67-1);

- Silver(I) perfluorooctanoate (CASRN 335-93-3);

- Sodium perfluorooctanoate (CASRN 335-95-5);

- Potassium perfluorooctanoate (CASRN 2395-00-8);

- Ammonium perfluorooctanoate (CASRN 3825-26-1);

- Chromium(III) perfluorooctanoate (CAS RN 68141-02-6); and

- Octanoyl fluoride, pentadecafluoro- (CASRN 335-66-0).

EPA would only take final action to remove the individually listed chemicals if the chemical categories that encompass the chemicals are added to the TRI through a final agency action.

Category reporting would require the facility to submit only one form for a category, which accounts for activities and quantities associated with all member chemicals. Facilities would first need to calculate the total weight of all chemicals that fall under a category for each threshold activity (*i.e.*, manufacture, process, and otherwise use), and compare the totals to the applicable threshold(s). If a facility exceeds one or more reporting thresholds (*i.e.*, for manufacture, process, and otherwise use) for a proposed PFAS category, it would be required to report the aggregated

quantities of releases and other waste management activities of the chemicals in that chemical category.

For example, a facility that manufactures 75 pounds of perfluorobutanesulfonyl fluoride (CASRN 375-72-4) and 50 pounds of potassium perfluorobutane sulfonate (CASRN 29420-49-3) would exceed the 100-pound reporting threshold for the PFBS, Salts, Sulfonyl Halides, and Anhydride category. Therefore, the facility would need to submit one form for the PFBS category. On this TRI reporting form for the PFBS category, the facility would aggregate information for all members of the PFBS category.

Note that, as this proposed rule is written, it is possible for a PFAS category to be inclusive of a PFAS that has a CBI claim related to its identity, and in which case, it would need to be reported as part of that category. For reviewing toxicity data to support TRI listings, the Agency did not consider chemicals with CBI claims regarding their identities as individual chemical listing candidates or as chemicals for which toxicity information would be directly considered for listing purposes. However, it is conceivable that there may be a form of an acid (*e.g.*, a salt) that would fit into a category being proposed, as the proposed categories are open-ended and not limited to a discrete list of chemicals. Because reporting a TRI category only requires a facility to report the category name and not the specific individual members, it's possible a facility may meet reporting requirements for a PFAS category based on activities involving a PFAS with a CBI claim. However, the reporting form would only reveal the broader category name and would not divulge the individual chemicals of that category involved. The EPA notes that it does not anticipate this scenario to be likely.

V. Reporting Threshold for PFAS EPA Is Proposing To Add to the TRI

For PFAS added to the EPCRA section 313 toxic chemical list under the provisions of NDAA section 7321(b) and (c), Congress established a manufacture, processing, and otherwise use reporting threshold of 100 pounds for each of the listed PFAS. The 100-pound reporting threshold reflects a concern for small quantities of PFAS due to their toxicity and persistence in the environment. The PFAS proposed for addition in this action have similar properties as those added by the other sections of the NDAA. EPA finds that it is appropriate to maintain consistency for all chemicals added to TRI pursuant to the NDAA (*i.e.*, those PFAS previously added by NDAA section 7321(b) and

(c)). Therefore, EPA is proposing to establish a 100-pound manufacture, processing, and otherwise use reporting threshold for the PFAS proposed for addition in this action. However, EPA is soliciting comment (see Unit VII.) on whether to implement a different reporting threshold (*i.e.*, whether a different threshold would equally or more capably obtain reporting on a substantial majority of total releases of these PFAS being proposed for addition to the TRI list). Similarly, should EPA implement a threshold other than 100 pounds for these PFAS, EPA is soliciting comment on whether to modify the reporting threshold for other TRI-listed PFAS accordingly.

Facilities are advised that some PFAS being proposed for listing in this action may fall under multiple TRI chemical categories. For example, silver heptafluorobutyrate (CASRN 3794–64–7) is being proposed as a member of the PFBA, Salts, Acyl Halides, and Anhydride category. Because of the silver constituent in the compound, it is also included in the silver compounds category. In cases where a TRI facility has a compound with constituents in two listed chemical categories, the facility must consider the total amount of the compound manufactured, processed, or otherwise used that must be applied to the reporting threshold for each category separately. Using the example of silver heptafluorobutyrate, a facility which has manufactured that compound must apply the same compound to threshold determinations for each listed category separately and determine whether that amount manufactured meets the reporting threshold for PFBA compounds (100 lbs manufactured) and for silver compounds (25,000 lbs manufactured), independently. This is consistent with longstanding EPA guidance on reporting for compounds covered by multiple chemical categories.

VI. Designating PFAS Being Proposed for Addition as Chemicals of Special Concern

EPA is proposing to add all of the PFAS described in Unit III. to the list of chemicals of special concern at 40 CFR 372.28. EPA first created the list of chemicals of special concern to increase the utility of TRI data by ensuring that the data collected and shared through TRI are relevant and topical (64 FR 58666, 58668 October 29, 1999 (FRL–6389–11) (Ref. 67)). EPA lowered the reporting thresholds for chemicals of special concern because even small quantities of releases of these chemicals can be of concern. The first chemicals that were added to the list of chemicals

of special concern were those identified as persistent, bioaccumulative and toxic (PBT) which, except for the dioxin and dioxin-like compounds category, have reporting thresholds of either 10 or 100 pounds depending on their persistent and bioaccumulative properties (Ref. 67). Chemicals of special concern are also excluded from the *de minimis* exemption (for both TRI reporting and TRI supplier notification requirements), may not be reported on Form A (Alternate Threshold Certification Statement), and have limits on the use of range reporting.

The *de minimis* exemption allows facilities to disregard small concentrations of TRI chemicals not classified as chemicals of special concern in mixtures or other trade name products when making threshold determinations and release and other waste management calculations. The *de minimis* exemption does not apply to the manufacture of a TRI chemical except if that chemical is manufactured as an impurity and remains in the product distributed in commerce, or if the chemical is imported below the applicable *de minimis* level. The *de minimis* exemption does not apply to a byproduct manufactured coincidentally as a result of manufacturing, processing, otherwise using, or any waste management activities. Further, facilities covered by TRI supplier notification requirements (40 CFR 372.45) may also use the *de minimis* exemption, except for chemicals of special concern.

The Form A provides facilities that otherwise meet TRI-reporting thresholds the option of certifying on a simplified reporting form provided that they do not exceed 500 pounds for the total annual reportable amount (defined subsequently in this document) for that chemical, and that their amounts manufactured, processed, or otherwise used do not exceed 1 million pounds. All chemicals of special concern (except certain instances of reporting lead in stainless steel, brass, or bronze alloys) are excluded from Form A eligibility. Form A does not include any information on releases or other waste management. Nor does it include source reduction information or any other chemical-specific information other than the identity of the chemical.

For certain data elements (Part II, Sections 5, 6.1, and 6.2 of Form R), for chemicals not classified as chemicals of special concern, the reportable quantity may be reported either as an estimate or by using the range codes that have been developed. Currently, TRI reporting provides three reporting ranges: 1–10

pounds, 11–499 pounds, and 500–999 pounds.

In the preamble to the 1999 rule establishing the *de minimis* exemption, EPA outlined the reasons for promulgating the *de minimis* exemption (*e.g.*, that facilities had limited access to information and that low concentrations would not contribute to the activity threshold) and determined that those rationales did not apply to chemicals of special concern. *Id.* At 58670. Among the reasons provided, EPA explained that even minimal releases of persistent bioaccumulative chemicals may result in significant adverse effects that can reasonably be expected to significantly contribute to exceeding the proposed lower threshold. *Id.* EPA also determined that facilities reporting on chemicals of special concern could not avail themselves of Form A reporting because the information provided on Form As is “insufficient for conducting analyses” on chemicals of special concern and would be “virtually useless for communities interested in assessing risk from releases and other waste management” of such chemicals (*i.e.*, the Form A does not include estimated release and other waste management quantities). *Id.* Lastly, EPA determined that range reporting was not appropriate for chemicals of special concern because the use of ranges could misrepresent data accuracy for PBT chemicals because the low or the high-end range numbers may not really be that close to the estimated value. *Id.* For the full discussion, see “Persistent Bioaccumulative Toxic (PBT) Chemicals; Lowering of Reporting Thresholds for Certain PBT Chemicals; Addition of Certain PBT Chemicals; Community Right-to-Know Toxic Chemical Reporting” (Proposed rule (64 FR 688, January 5, 1999 (FRL–6032–3)) and Final rule (64 FR 58666, October 29, 1999 (FRL–6389–11) (Ref. 67))).

EPA recently finalized a rulemaking (88 FR 74360; (Ref. 68)) to categorize PFAS added to EPCRA section 313 by NDAA section 7321(b) and (c) as chemicals of special concern, listing such PFAS in 40 CFR 372.28. In that rulemaking, EPA highlighted that the NDAA set a 100-pound reporting threshold for PFAS added by NDAA section 7321(b) and (c), which indicates a concern for small quantities of such PFAS. Further, EPA explained that the availability of certain burden reduction tools (*i.e.*, *de minimis* levels, Form A, and range reporting) is not justified for chemicals where there is a concern for small quantities (88 FR 74360, 74363). This same rationale applies to the PFAS being proposed for addition in this rulemaking action.

Further, due to the strength of the carbon-fluorine bonds, EPA noted in the October 31, 2023, rulemaking that many PFAS can be very persistent in the environment (Ref. 3, 4, 69). Persistence in the environment allows PFAS concentrations to build up over time; thus, even small releases can be of concern. As with PBT chemicals, permitting reporting facilities to continue to rely on the burden reduction tools (*de minimis* levels, Form A, and range reporting) would eliminate reporting on potentially significant quantities of the listed PFAS. As explained in more detail subsequently in this document, EPA's rationale for eliminating these burden reduction tools for PBT chemicals (64 FR 714–716) applies equally well to PFAS.

The *de minimis* exemption allows facilities to disregard concentrations of TRI listed chemicals below 1% (0.1% for carcinogens) in mixtures or other trade name products they import, process, or otherwise use in making threshold calculations and release and other waste management determinations. Since the *de minimis* level is based on relative concentration rather than a specific amount, the application of this exemption to PFAS listed under NDAA section 7321(d) could allow significant quantities of such PFAS to be excluded from TRI reporting by facilities. For example, if a facility imports, processes, or otherwise uses 100,000 pounds of a mixture or trade name product that contains 0.5% of a listed PFAS, then 500 pounds (or five times the reporting threshold) would be disregarded. This exemption thus is inconsistent with a concern for small quantities of PFAS. Many PFAS are used in products at levels below the established *de minimis* levels (Ref. 5, 70). If EPA were to allow entities to apply the *de minimis* exemption with respect to PFAS, facilities would be able to discount such uses when determining whether an applicable threshold has been met to trigger reporting.

Additionally, in EPA's recent rulemaking to categorize PFAS already on the TRI list as chemicals of special concern, EPA also eliminated the use of the *de minimis* exemption for supplier notification requirements for all chemicals of special concern (Ref. 2). EPA determined that allowing facilities covered by the TRI supplier notification requirements to continue the use of the *de minimis* exemption for supplier notifications for chemicals of special concern limited TRI reporting facilities' knowledge of potentially reportable quantities of chemicals of special concern in their on-site activities. Many PFAS are used in products below the

established *de minimis* levels (Ref. 5, 70) which results in downstream users of those products not knowing they are receiving a product that contains a TRI-reportable PFAS. EPA concluded that it is important and necessary to eliminate the supplier notification *de minimis* exemption for PFAS added to the TRI list pursuant to NDAA section 7321(b) and (c); otherwise, the Agency may fail to collect information on amounts of PFAS that significantly exceed the reporting threshold. The same logic extends to PFAS being proposed in this action pursuant to NDAA section 7321(d).

As described previously, the Form A provides certain covered facilities the option of submitting a substantially shorter form with a reduced reporting burden (Ref. 71). This means that if facilities that are required to report data on PFAS were able to file a Form A, those facilities would not be providing specific quantity data on up to 500 pounds of a listed PFAS (five times the reporting threshold). While the Form A does provide some general information on the quantities of the chemical that the facility manages as waste, this information may be insufficient for conducting analyses on PFAS and may be less meaningful for communities interested in assessing risk from releases of PFAS. The threshold category for amounts managed as waste does not include quantities released to the environment as a result of remedial actions or catastrophic events not associated with production processes (section 8.8 of Form R). This means that if facilities that are required to report data on PFAS were to qualify to file a Form A, they would not be providing specific quantity data on up to 500 pounds of a listed PFAS (five times the reporting threshold). Given that even small quantities of PFAS may result in elevated concentrations in the environment, EPA believes it would be inappropriate to allow a reporting option that would exclude information on some releases. For reporting year 2021, approximately 10% of the reporting forms submitted for the listed PFAS were Form As (*i.e.*, reporting for TRI reflects 87 active reporting forms of which 78 were Form Rs and 9 were Form As).

For these reasons, as well as to align these proposed PFAS additions with the PFAS that the NDAA added directly to the TRI chemical list, eliminating the availability of the use of Form A for PFAS is consistent with a concern for understanding small quantities of PFAS.

For TRI-listed chemicals, other than chemicals of special concern, releases and off-site transfers for further waste

management of less than 1,000 pounds can be reported using ranges or as a whole number. The reporting ranges are: 1–10 pounds; 11–499 pounds; and 500–999 pounds. For larger releases and offsite transfers for further waste management of the toxic chemical, the facility must report the whole number. Use of ranges could reduce data accuracy because the low- or the high-end range numbers may not be that close to the estimated value, even taking into account inherent data errors (*i.e.*, errors in measurements and developing estimates). For PFAS, it is important to have accurate data regarding the amount released even when the quantities are relatively small, since concern may be tied to even small quantities of a substance. This issue was apparent for PFAS for reporting year 2021 since much of the data reported was for less than 1,000 pounds.

EPA anticipates that the elimination of these burden reduction tools will increase the amount and quality of data collected for PFAS and is consistent with the concern for small quantities of PFAS (Ref. 2). Per the Ratio-Based Burden Methodology, the Form R unit burden per chemical is 35.70516 hours compared to the Form A unit burden per chemical of 22.0 hours. With a weighted average wage rate of \$79.23 and a first-time filer factor of 2.1, the Form R unit cost per chemical is \$5,941 and the Form A unit cost per chemical is \$3,661. To avoid understating per-firm impacts, EPA assumes each small entity will submit two Form Rs. Thus, small entities are expected to incur \$11,883 in costs for the first year compared to \$7,322 if they were allowed to submit two Form As instead.

VII. Clarifying the Framework for NDAA Section 7321(c) Additions

Additional PFAS are automatically added to the TRI list on an annual basis by NDAA section 7321(c). Specifically, PFAS that meet the criteria in NDAA section 7321(c) are deemed added to the TRI list on January 1 of the year after those criteria are met. The criteria that lead to listing pursuant to NDAA section 7321(c) are identified as follows:

- Final Toxicity Value. The date on which the Administrator finalizes a toxicity value for the PFAS or class of PFAS;
- Significant New Use Rule (SNUR). The date on which the Administrator makes a covered determination for the PFAS or class of PFAS;
- Addition to Existing SNUR. The date on which the PFAS or class of PFAS is added to a list of substances covered by a covered determination;

- Addition as an Active Chemical Substance. The date on which the PFAS or class of PFAS to which a covered determination applies is:

- Added to the list published under TSCA section 8(b)(1) (*i.e.*, TSCA Inventory) and designated as an active chemical substance under TSCA section 8(b)(5)(A); or

- Designated as an active chemical substance under TSCA section 8(b)(5)(B) on the TSCA Inventory.

For purposes of identifying PFAS that are automatically added to the TRI list following an event specified under NDAA section 7321(c), EPA considers any chemical to be a PFAS if it is identified by EPA as a PFAS in the event that triggers its listing pursuant to NDAA section 7321(c). This approach recognizes that different programs may have reason to use different definitions of PFAS and that definitions of PFAS may evolve. This approach is also consistent with the language used in NDAA section 7321(c), which deems chemicals included to TRI following an EPA action related to PFAS without limiting or defining what is meant by PFAS.

The first update rule identifying PFAS that met the NDAA section 7321(c) criteria during 2020 was published on June 3, 2021 (86 FR 29698) (FRL–10022–25)). NDAA section 7321(c) is self-implementing in that PFAS subject to the activities described previously are directly added to the TRI list with an effective date of January 1 of the year following the date on which the activity occurred. That is, no rulemaking is required to effectuate the addition, though EPA has promulgated associated rules to update 40 CFR 372.65 to include any such PFAS added to the TRI list.

To date, EPA's updates to 40 CFR 372.65 have only included a PFAS if the CASRN associated with the PFAS was specifically listed in a triggering event, and if EPA, as part of the triggering event, explicitly identified that substance as a PFAS. For instance, in December 2022, EPA published an IRIS toxicity assessment for perfluorobutanoic acid (PFBA, CASRN 375–22–4) and related salts (Ref. 25). The assessment stated that the toxicity value derived for PFBA also applies to PFBA's salts, providing the following as examples in the document: sodium perfluorobutanoate (CASRN 2218–54–4), potassium heptafluorobutanoate (CASRN 2966–54–3), ammonium perfluorobutanoate (CASRN 10495–86–0), and perfluorobutanoate (CASRN 45048–62–2). Thus, pursuant to NDAA section 7321(c), EPA promulgated a final rule in 2023 (88 FR 41035; June 23,

2023) to update the list of TRI chemicals at 40 CFR 372.65 to include each of the aforementioned PFAS individually.

The approach described above to list perfluorobutanoic acid and its salts in tension with the approach proposed in this notice to list a PFAS acid along with its salts and/or acyl/sulfonyl halides and anhydride as a category. Applying the approach described in this proposal to list certain PFAS as TRI chemical categories (*i.e.*, a category comprised of the acid, associated salts, and acyl/sulfonyl halides) to PFAS automatically added to TRI by NDAA section 7321(c) would result in consistent TRI listings so that all acids and associated salts and acyl/sulfonyl halides would be TRI-listed as categories. If PFAS automatically added to TRI due to the triggering actions were not listed similarly at the time of their addition to the TRI list as the PFAS chemical categories being proposed in this rulemaking, inconsistencies would arise with how NDAA-added PFAS are reported. This would complicate the reporting scheme and introduce inconsistencies in the reported data, thereby burdening EPA, reporting entities, and other TRI data users due to this lack of consistency. Further adding to the TRI list in the CFR only those CASRNs identified as examples in an action that triggers the TRI listing could potentially leave some PFAS added to the TRI by NDAA section 7321(c) off the TRI list in the CFR creating confusion for the regulated community. For example, where a triggering action provides examples of the CASRNs covered, but does not list all of the CASRNs covered individually, EPA's update to the CFR could leave off related PFAS that were covered by the triggering event but were not listed as examples of covered substances (*e.g.*, where a document that finalizes a toxicity value identifies specific chemical names/CASRNs as well as states that the toxicity value applies to salts of the given chemical). Additionally, NDAA section 7321(c) provides for the addition of “a perfluoroalkyl or polyfluoroalkyl substance” as well as a “class of perfluoroalkyl or polyfluoroalkyl substances.” Given the TRI context for NDAA section 7321(c), interpreting “class of perfluoroalkyl or polyfluoroalkyl substances” to mean that a TRI chemical category is created for PFAS and associated chemicals (*e.g.*, salts and/or acyl/sulfonyl halides) when a finalized toxicity value applies aligns with the statutory language.

Thus, where the triggering action is applicable to both the acid and associated salts and/or acyl/sulfonyl

halides, EPA is proposing regulatory text that would designate each PFAS added in the future pursuant to NDAA section 7321(c) as a chemical category of the acid and associated salts and acyl/sulfonyl halides. Specifically, if EPA includes language as part of the NDAA section 7321(c) triggering action (*e.g.*, finalizing a toxicity value, or adding to an existing SNUR) that the action is applicable to related chemicals (*e.g.*, by naming one or more associated salt(s), acyl/sulfonyl halide(s), or similar associated compound), then EPA will interpret the action to be a triggering event under NDAA section 7321(c) for all identified types of PFAS (*i.e.*, the acid, salts, and acyl/sulfonyl halides) and those PFAS will be automatically added to the TRI list as a chemical category. For example, if EPA publishes a final toxicity value for a given PFAS and its salts (by either specifying the CASRNs for at least some of the associated salts or providing a general statement that the toxicity value applies to salts associated with the chemical), the resultant addition to the TRI list will be a chemical category comprising of that PFAS (acid) as specified in the published final toxicity value and its associated salts and acyl/sulfonyl halides. EPA requests comment on this approach.

Further, EPA notes that certain final toxicity values may omit related salts, acyl/sulfonyl halides, and anhydrides that have at least the same toxicity as the acid, if not more, due to the additional contributions to the overall chemical's toxicity from substituents unrelated to the acid. Generally, provided the final toxicity value indicates that it applies to salts and other forms of the chemical then all such compounds would be included in the resulting TRI chemical category. Where the final toxicity value only applies to certain chemicals but omits some due to additional contributions of toxicity, the resulting TRI chemical category will also include such chemicals. To use the same example of the 2022 IRIS assessment for PFBA and its related salts: the assessment stated it would not necessarily apply to non-alkali metal salts of PFBA, such as silver heptafluorobutyrate (CASRN 3794–64–7) due to the metal's PFBA-independent contribution to toxicity. For PFBA, the finalized toxicological review document determined that “due to the possibility of PFBA-independent contributions of toxicity”, the final toxicity value excluded silver heptafluorobutyrate. Thus, because the toxicity of silver heptafluorobutyrate is at least comparable to that of the final toxicity

value for PFBA, silver heptafluorobutyrate would be included in the resulting TRI PFAS category for PFBA.

Put another way, where a PFAS final toxicity value omits specific substances, the explicitly omitted PFAS generally would not be deemed to be part of the category added to the TRI by the triggering event unless the reason for the omission is due to the identified substances as having additional toxicological concerns. Where the final toxicity value indicates that it only applies to a set of specifically identified chemicals, and not to a broader set of similar chemicals (*e.g.*, salts) then the chemical category deemed added to the TRI by NDAA section 7321(c) generally would include only those specifically identified PFAS.

EPA requests comment on this approach and on an alternate approach under which salts and halides omitted from the category would be excluded regardless of whether the finalized publication providing the toxicity value indicates that the toxicity concern would similarly apply to salts and/or halides. If this latter approach were adopted, EPA would plan to subsequently add the salts and halides to TRI through a separate rulemaking.

Additionally, NDAA section 7321(c) effectuates TRI listings based on certain EPA activities that may include the identities (name and/or CASRN) of ions (*i.e.*, cations/anions). Accordingly, such (an)ions have been added to the TRI (*i.e.*, perfluorobutanoate (CASRN 45048–62–2)). However, EPA has previously indicated that an ion does not meet the definition of a chemical for purposes of listing on the EPCRA section 313 list (59 FR 61432, 61460 (FRL–4922–2)) (Ref. 11). EPA considers the addition of an ion, or anion, of a chemical as being, in effect, an addition of a category of such compounds that dissociate in water (*e.g.*, salts). To align the listing of such (an)ions with longstanding TRI policy and to ensure consistent reporting of NDAA-added PFAS, EPA proposes to list any (an)ion identified by a NDAA section 7321(c) action as part of a category for the associated acid, as is being proposed for other PFAS in this rulemaking.

In NDAA section 7321(c)(1)(A)(i), Congress provided that substances are added to TRI as of January 1 of the year after the Administrator “finalizes a toxicity value for the perfluoroalkyl or polyfluoroalkyl substance or class of perfluoroalkyl or polyfluoroalkyl substances.” Congress did not, however, define the term “toxicity value.” Nor did Congress indicate what EPA activities or publications might

constitute finalized toxicity values for purposes of this provision. EPA has not previously articulated an interpretation of the term “toxicity value” as it relates to NDAA section 7321(c)(1)(A)(i). In the absence of a statutory definition for “toxicity value”, EPA assumes Congress intended to use the term as it is most commonly used in the scientific community. For example, the California Department of Toxic Substances Control defines the “noncancer toxicity value” as “the amount of a chemical or contaminant that a person can ingest or breathe every day for a lifetime without any expected adverse health effects.” (Ref. 72). EPA has previously described toxicity values and examples of toxicity values: “Toxicity values (including reference doses [RfD], reference concentrations [RfC], cancer slope factors, and inhalation unit risks) needed for use in human health risk assessment are generally derived by reviewing available dose-response data in animals or humans, selecting a point of departure in the data that is judged most suitable, and adjusting for associated uncertainties” (Ref. 73). EPA believes it is most consistent with the plain scientific meaning of “toxicity value” to interpret the term in this context as referring to the analysis and establishment of a value at which adverse effects of a substance may occur or a value at which adverse effects of a substance are not anticipated to occur. EPA produces various types of toxicity assessments that provide toxicity values. These toxicity assessments typically include hazard identification, dose-response assessment, and—as examples—derive “toxicity values” for adverse noncancer effects (called oral reference doses [RfDs], inhalation reference concentrations [RfCs]) and/or cancer effects (called cancer slope factors [CSFs], inhalation unit risk [IURs]) after chronic and/or subchronic exposure and determine cancer descriptors when cancer data are available. Listed below are EPA events considered to provide “toxicity values.”

To assist stakeholders in understanding how EPA interprets NDAA section 7321(c), EPA is proposing to provide a list of EPA events which the Agency is interpreting as “finaliz[ing] a toxicity value for the perfluoroalkyl or polyfluoroalkyl substance or class of perfluoroalkyl or polyfluoroalkyl substances” as used in NDAA section 7321(c)(1)(A)(1). These EPA events analyze and establish a value at which adverse effects of a substance may occur or a value at which adverse effects of a substance are not anticipated to occur. These values can

be finalized by the Agency through the following types of events which, would trigger addition of the PFAS or class of PFAS to TRI under NDAA section 7321(c):

- EPA’s IRIS Program develops human health assessments that identify and characterize health effects information on environmental chemicals to which the public may be exposed, including derivation of toxicity values. The publication of a final IRIS assessment on the EPA website that provides a toxicity value for one or more PFAS would constitute a triggering event for those PFAS under NDAA 7321(c)(1)(A)(1). Each IRIS assessment can cover a chemical, a group of related chemicals, or a complex mixture. IRIS assessments are an important source of toxicity information used by EPA, state and local health agencies, other federal agencies, and international health organizations. IRIS assessments provide various types of toxicity values for health effects resulting from chronic exposure to chemicals, including reference concentrations (RfC) (an estimate of a continuous inhalation exposure to the human population that is likely to be without an appreciable risk of deleterious effects during a lifetime), reference dose (RfD) (an estimate of a daily oral exposure to the human population that is likely to be without an appreciable risk of deleterious effects during a lifetime), and cancer descriptions (including how likely the substance is to be carcinogenic as well as estimates of the increased cancer risk from oral and inhalation exposures). A final IRIS assessment, thus, provides toxicity values for a chemical. Publication of a final IRIS assessment on a PFAS would cause that PFAS, if not already on the TRI list, to be added to the TRI list pursuant to NDAA 7321(c)(1)(A)(1).

- EPA’s Provisional Peer-Reviewed Toxicity Values (PPRTVs) Program develops assessments which provide toxicity information and toxicity values for the Superfund Program (which is responsible for cleaning up some of the nation’s most contaminated land and responding to environmental emergencies, oil spills and natural disasters). The publication of a final assessment on the EPA website that provides a toxicity value for one or more PFAS would constitute a triggering event for those PFAS. The PPRTV Program supports the Agency’s mission to protect human health and the environment by identifying and characterizing the health hazards of—and providing an important source of toxicity information and toxicity values

for—chemicals of concern to the Superfund Program. PPRTV assessments are developed in response to requests from EPA's Superfund Program to the Superfund Health Risk Technical Support Center (STSC) within EPA's Office of Research and Development's (ORD's) Center for Public Health and Environmental Assessment (CPHEA). PPRTVs are derived after a review of the relevant scientific literature and using Agency methodologies, practices, and guidance for the development of toxicity values (e.g., oral RfDs, inhalation RfCs, provisional oral slope factors (p-OSF), and provisional inhalation unit risks (p-IUR)). A final PPRTV, thus, provides toxicity values for a chemical.

Publication of a final PPRTV on a PFAS would cause that PFAS, if not already on the TRI list, to be added to the TRI list pursuant to NDAA 7321(c)(1)(A)(1).

- EPA develops EPA Transcriptomic Assessment Products (ETAP) for chemicals lacking traditional toxicity testing data. Using transcriptomics, which measures gene activity, ETAP determines the daily dose of a chemical where there is likely no appreciable human health risk. More specifically, an ETAP provides toxicity values by correlating gene activity from short-term transcriptomic studies with toxicological responses from chronic toxicity tests. The measured gene activity is used to identify doses that cause toxicity. EPA follows a standard methodology for performing the studies and developing the assessments. ETAP reports provide a transcriptomic reference value (TRV), an estimate of a daily oral dose to the human population that is likely to be without appreciable risk of adverse non-cancer health effects over a lifetime. A final ETAP report, thus, provides toxicity values for a chemical. Publication of a final ETAP report on a PFAS would cause that PFAS, if not already on the TRI list, to be added to the TRI list pursuant to NDAA 7321(c)(1)(A)(1).

- EPA prepares toxicity values to support pesticide registrations or review of registrations pursuant to FIFRA section 3. Before manufacturers can sell pesticides in the U.S., EPA must evaluate the pesticides thoroughly to ensure that they meet federal safety standards for registration. The registration process includes the submission and evaluation of data pertaining to the identity, composition, toxicity, exposure, and environmental fate of each pesticide. Pursuant to FIFRA, EPA assesses a variety of potential human health and environmental effects associated with use of the pesticide product for which registration has been requested, or for

which registration review is ongoing. This includes developing risk assessments that evaluate the potential for harm to humans, wildlife, fish, and plants, including endangered species and non-target organisms, and which may derive toxicity values such as a population-adjusted dose (PAD) or RfD. Pesticide registration reviews must address several factors before establishing a tolerance, including but not limited to: cumulative effects from exposure to pesticides that share a mechanism of toxicity; whether the pesticide produces human health effects similar to effects caused by naturally-occurring estrogen or other endocrine-disruption effects; and whether infants, children, or other sensitive subpopulations are more susceptible due to exposure to the pesticide. Publication of a final risk assessment prepared in support of a pesticide registration or registration review decision for a PFAS would cause that PFAS if not already on the TRI list to be added to the TRI list pursuant to NDAA 7321(c)(1)(A)(1).

- EPA derives toxicity values pursuant to TSCA section 6, which requires EPA to develop risk evaluations on chemicals designated as high-priority substances. Risk evaluations include the hazards, exposures, conditions of use, and potentially exposed or susceptible subpopulations. Publication of a TSCA section 6 final risk evaluation that provides a final toxicity value on a PFAS would constitute a triggering event for the PFAS covered by that toxicity value. TSCA requires that risk evaluations conducted by EPA “integrate and assess available information on hazards.” 15 U.S.C. 2605(b)(4)(F)(i). Accordingly, in a risk evaluation, EPA identifies the adverse health or environmental effects caused by exposure to the subject chemical. Hazards may include, but are not limited to, toxicity with respect to cancer, mutation, reproductive, developmental, respiratory, immune, cardiovascular impacts, and neurological impairments, and a point of departure (POD) or cancer risk is calculated. A final risk evaluation, thus, provides toxicity values for a chemical. Publication of a final risk evaluation on a PFAS would cause that PFAS if not already on the TRI list to be added to the TRI list pursuant to NDAA 7321(c)(1)(A)(1).

- EPA derives toxicity values to support regulatory and non-regulatory activities under the Safe Drinking Water Act and Clean Water Act. The EPA's Water Program develops human health assessments called Toxicity Assessments or Health Effects Support

Documents (HESDs), that identify and characterize health effects information on chemicals that are known or likely to be found in water, including derivation of toxicity values and determination of cancer descriptors when cancer information is available. The publication of a final assessment that provides a toxicity value for a PFAS would constitute a triggering event. EPA develops human health assessments to support rules or drinking water and other health advisories. These assessments are called Toxicity Assessments or Health Effects Support Documents (HESDs) and they identify and characterize health effects information on chemicals that are known or likely to be found in water. They also include derivations of toxicity values and determinations of cancer descriptors when cancer information is available. These documents provide the underlying RfD or, if applicable, the cancer risk values for drinking water contaminants that support the associated Health Advisory. A final HESD, thus, provides a toxicity value for a chemical. Publication of a final HESD on a PFAS would cause that PFAS if not already on the TRI list to be added to the TRI list pursuant to NDAA 7321(c)(1)(A)(1).

- Other toxicity values that EPA's offices finalize. For example, in addition to the IRIS program and PPRTV assessments noted previously, ORD publishes other toxicity assessments that include toxicity values. Publication of a final toxicity assessment that provides a toxicity value for one or more PFAS would constitute a triggering action for those PFAS.

Whenever one of the triggering actions identified here is taken for a PFAS that is not on the TRI list, then, as provided by NDAA section 7321(c), such a PFAS would be added to the TRI list with an effective date of January 1 of the following calendar year.

EPA is proposing to explain what Agency events constitute finalization of a toxicity value for a PFAS or class of PFAS to ensure consistent implementation of the statutory provision (i.e., NDAA section 7321(c)). The Agency recognizes that Congress did not limit the term “toxicity value” to values finalized by any particular program such as EPA's IRIS program or to values finalized by any specific EPA office, but instead used broad language referring to “a toxicity value for the perfluoroalkyl or polyfluoroalkyl substance or class of perfluoroalkyl or polyfluoroalkyl substances” finalized by the Administrator. This statutory language covers actions “by the Administrator” to finalize toxicity

values. By referencing actions taken “by the Administrator” instead of specifying actions taken by a particular EPA office, division or program, Congress provided that values finalized by any Agency office, division or program may trigger TRI listing. For purposes of TRI listing, it does not matter which Agency program finalizes the toxicity value. Moreover, recognizing that NDAA section 7321(c) covers toxicity values finalized by multiple types of Agency actions and programs is consistent with the purpose of EPCRA section 313 as described by Congress in paragraph (h) (*i.e.*, to provide information to the public and governmental entities; to assist in the conduct of research and data gathering; to aid in the development of appropriate regulations, guidelines, and standards; and for other similar purposes). Ensuring that TRI data on PFAS are available may be helpful to inform the public and also, may assist EPA programs to assess risk by using the TRI exposure information. Further, as the NDAA did not define “finalize a toxicity value” nor limit the scope to only certain EPA programs or authorities involving toxicity values, the Agency concludes it is reasonable to interpret this provision as applying to multiple Agency actions, as defined previously.

Further, the NDAA did not expand on the meaning of “finalize”. In the absence of a congressional definition, EPA assumes Congress intended to use the plain meaning of the term “finalize.” Merriam-Webster’s online dictionary’s (<https://www.merriam-webster.com>) first definition of “finalize” is “to put in final or finished form” (see also Webster’s Third New International Dictionary of the English Language 851 (1993)) but there is no universally recognized understanding of what that means in this context. In the context of the section 7321 of the NDAA, the Agency proposes to conclude this means to produce a toxicity value for a chemical following established Agency regulations, guidance, protocol, or procedure(s). The process for finalizing a toxicity value might differ slightly depending on the unique needs or evaluations performed by individual EPA offices or programs; however, as previously explained, each triggering event described in this proposal results in the analysis and establishment of a value at which adverse effects of a substance may occur or a value at which adverse effects of a substance are not anticipated to occur. EPA has determined that its interpretation is consistent with historical application of the word “final”

or “finalizes”, as well as the intent of the Sec. 7321 of the NDAA to “improve transparency by requiring emitters to report to the EPA the release of any of one of hundreds of PFAS compounds into the environment”. (165 Cong. Rec. S4531–01 (June 26, 2019) (statement of Sen. Shelley Capito)).

EPA proposes to conclude that when EPA publishes or issues one of the document types identified above, including when it takes final action to update or revise such a document, and that document includes a toxicity value for a PFAS, the Agency is at that time “finalizing a toxicity value” as that term is used in the 2020 NDAA. This approach recognizes that each of the document types described above, when published or issued, include EPA’s final assessment of hazard information regarding a particular chemical substance.

This reading is consistent with the approach taken by Congress in paragraph (b) of section 7321 of the NDAA. Paragraph (b) identifies specific PFAS that are added to TRI beginning January 1 of the calendar year following enactment of the 2020 NDAA. The chemical substances that Congress identified for immediate inclusion on TRI included chemicals for which EPA was, at the time of the NDAA’s passage, undertaking toxicity assessments to derive related toxicity values beyond the IRIS program. For example, EPA published for public comment draft drinking water Human Health Toxicity Values for GenX chemicals in 2018 (Ref. 74) and released a final Health Effects Support Document for PFOS in 2016 (Ref. 75). At the time of the NDAA’s enactment, Congress immediately added PFAS (GenX and PFOS) for which only non-IRIS toxicity values were either published or under review. Further, the IRIS assessments and the documents published or issued by other EPA programs identified above as events which would trigger addition of the PFAS or class of PFAS to TRI under NDAA section 7321(c), due to their finalizing toxicity values for PFAS, all contain rigorous evaluations of data to support finalization of a toxicity value. The scientific rigor of these documents is consistent with the rigor of scientific literature used for chemical listings pursuant to EPCRA section 313(d)(2). In other words, each of the above listed EPA triggering events aligns with publications that the Agency would use to support a TRI listing. Congress, in providing paragraph 7321(c)(1)(A)(i) of the NDAA, created a mechanism that would alleviate EPA from conducting an EPCRA section 313(d)(2) rulemaking to list chemicals for which the Agency had

developed support for a TRI listing. And, thus, this provision fast tracks the addition of such chemicals to assist in the collection of TRI data to further the statute’s purposes.

For purposes of which chemicals constitute “PFAS” pursuant to triggering events provided in NDAA section 7321(c), EPA considers any chemical to be a PFAS if it is determined to be a PFAS by the applicable EPA action. EPA anticipates that most EPA activities that trigger additions of PFAS to TRI will determine the chemical to be PFAS as part of the action, thereby obviating the need to apply a specific definition to determine whether the chemical is a PFAS for purposes of NDAA section 7321(c). As explained in Unit II.A., this approach of treating chemicals as PFAS if they are determined to be PFAS by the applicable triggering EPA event supports the scope of TRI, helping to ensure that data on PFAS is available to help support informed decision-making by companies, government agencies, non-governmental organizations, and the public.

For example, 1,1,1-Trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide (TFSI) is not a PFAS per the definition being used for purposes of identifying PFAS candidates for this rulemaking. However, EPA published a final human health toxicity value for TFSI in July 2023 that also applies to the related salt (*e.g.*, lithium bis[(trifluoromethyl)sulfonyl]azanide (HQ–115) (CASRN 90076–65–6). Accordingly, this chemical, due to it being labeled a PFAS by the published document, is on the TRI list with an effective date of January 1, 2024. Pursuant to the proposed CFR text for implementing the automatic addition of PFAS process provided by NDAA section 7321(c), if finalized, TFSI would be added to the TRI list as a chemical category that includes TFSI and any associated salts (note that acyl/sulfonyl halides and anhydrides would not be relevant to this category).

VIII. Request for Comment

In this document, EPA is providing an opportunity for public comment on the actions proposed herein and the rationale for those proposed actions. EPA is also specifically requesting public comment on the following topics:

1. EPA seeks comment on its category approach for listing and grouping PFAS for TRI reporting purposes (*i.e.*, Acid, Associated Salts, Acyl/Sulfonyl Halides, and Anhydride). Specifically, EPA solicits comment on the Agency’s proposed chemical categories and

whether they should include any or all such compounds related to the acid (that is, salts, acyl/sulfonyl halides, and anhydrides), or to keep such additional, related listings separate as individual listings. For instance, the Agency is requesting comment on the examples the Agency is proposing to list in this rule as additions based on their inclusion in their respective categories: perfluorobutanoyl fluoride (CASRN 335-42-2) based on perfluorobutanoic acid (PFBA) (CASRN 375-22-4), 3,3,4,4,5,5,6,6,7,7,8,8,8-, tridecafluorooctanesulphonyl chloride (CASRN 27619-89-2) based on 1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) (CASRN 27619-97-2), and pentafluoropropanoic anhydride (CASRN 356-42-3) based on perfluoropropanoic acid (PFPrA) (CASRN 422-64-0).

2. Additionally, in the event that EPA uses a category approach for TRI PFAS reporting, the Agency is considering whether to expand the categories (*e.g.*, to include additional chemicals related to the acid on which a given category is based, beyond the previously mentioned salts, acyl/sulfonyl halides, and anhydrides), along with data supporting such a listing under EPCRA 313.

3. In this document, EPA has defined category names based on the composition of the categories with the most inclusive identified members. EPA requests comment on whether all category names should refer to salts, acyl/sulfonyl halides, and/or anhydrides related to the acid for which the category is named, or only include salts, acyl/sulfonyl halides, and/or anhydrides where that category specifically identifies such examples as part of the category's composition. For example, the 9Cl-PF3ONS (Unit III.B.1.) and 11Cl-PF3OUDS (Unit III.B.2.) category names, as proposed, are inclusive of potential sulfonyl halides and anhydrides because these chemicals could exist from a chemistry standpoint, but the Agency is unaware of such chemicals being used in commerce. By including potential sulfonyl halides and anhydrides in the category name, if a facility did manufacture, process, or otherwise use such chemicals and triggered TRI reporting requirements for its dealings with those chemicals, then reporting on such chemicals would be part of its reporting on the associated category, along with its dealings with other chemicals in the given category. Naming the categories to be inclusive of acyl/sulfonyl halides and anhydrides will leave room for later addition into the category.

4. EPA welcomes comment on the proposed reporting approach to such

categories that, if finalized, would require facilities to calculate thresholds and report the aggregated weights of release and other wastes from all constituents of a PFAS category. This proposed approach is an alternative to a requirement to report the weights of just the parent acid, ion, or other moiety of concern of all chemicals in that category for release and other waste management reporting (such as, for example, the release reporting requirements of metal compound categories or water-dissociable nitrate compounds).

5. EPA seeks comment on whether any of the PFAS being proposed as individual listings should be listed as categories instead (*i.e.*, are any of the proposed individual listings anticipated to have salts, acyl/sulfonyl halides, an anhydride, or other related substances for which toxicity concerns would be anticipated to be similar to the proposed individually listed chemical?). EPA notes that categories could be formed for an amide and related chemicals (*e.g.*, salts), rather than listing them as individual chemicals, and specifically solicits comment on whether to list PFAS amides as categories similar to the categories including the carboxylic/sulfonyl PFAS acids and their salts.

6. EPA seeks comment on whether or not all the proposed categories should include acyl/sulfonyl halides and anhydrides. EPA has included them where known, but there may be some missing, or the Agency may become aware of an acyl/sulfonyl halide or anhydride in the future.

7. EPA seeks comment on the approach of listing a PFAS acid based on its salt. Where hazard data sufficient to support a listing were available for a PFAS salt but not the corresponding non-salt PFAS acid, the Agency could list the PFAS acid based on the toxicity of the salt. This assumes the compound comprising the salt does not contribute its own toxicity separate from the PFAS portion of the chemical. For example, perfluoro(2-ethoxy-2-fluoroethoxy)acetic acid ammonium salt (EEA-NH₄; CASRN 908020-52-0) is individually being proposed for listing. Perfluoro-3,6-dioxaoctanoic acid (CASRN 80153-82-8) is the corresponding PFAS acid, with an expected similar toxicity to the ammonium salt (negligible toxicity expected to be contributed by the NH₄⁺ in the ammonium salt). Note that this also relates to Unit VIII. about PFAS amides and related substances as categories.

8. EPA seeks comment on whether there are PFAS beyond the chemicals identified in this proposal for which

available data would be sufficient for a TRI listing. EPA solicits comment on PFAS that the Agency might have overlooked where existing hazard literature would support a finding required by EPCRA 313(d)(2) for a TRI chemical listing, including on the basis of its expected degradants. Examples of such chemicals include those PFAS specified by the NDAA section 7321(d)(A) through (N), but for which EPA did not find sufficient information supporting a listing pursuant to EPCRA 313(d)(2) criteria which include 8:2 fluorotelomer sulfonic acid (8:2 FTS) (CASRN 39108-34-4) and N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA) (CASRN 2991-50-6).

For any PFAS that is not included in this proposed rule but which commenters support listing, EPA requests any supporting data of sufficient quality to support an EPCRA 313 listing. In submitting literature for EPA's consideration, please refer to previous TRI chemical listing rule discussions for further guidance on how the Agency determines whether a study or data is sufficient for TRI listing, and whether there is sufficient data support an EPCRA 313 listing: see the Addition of 12 Chemicals final rule (87 FR 73475; November 30, 2022 (Ref. 16)) and the 1994 chemical list expansion final rule (59 FR 61432; November 30, 1994 (Ref. 11)).

EPA is not proposing to list any chemicals based on their being known to cause or their being reasonably anticipated to cause significant adverse acute human health effects at concentration levels that are reasonably likely to exist beyond facility site boundaries as a result of continuous, or frequently recurring, releases (42 U.S.C. 11023(d)(2)(A)). Where EPA noted acute human health effects for a given chemical, the Agency also concluded that a serious or irreversible adverse chronic human health effect or significant adverse effect on the environment of sufficient seriousness existed to support the listing of that chemical. Accordingly, EPA focused on the chronic human health effect and/or effect on the environment in lieu of addressing the "beyond facility site boundaries" requirement in a listing based on a significant adverse acute human health effect. EPA is soliciting comment on any PFAS that is not on the TRI list and that this proposed rule has not included as a candidate that might be added to the TRI list based on a significant adverse acute human health effect. Additionally, information related to possible exposure to the chemical beyond facility site boundaries is also being requested.

9. EPA seeks comment on its approach using ECOTOX and EPA HAWC projects (and information summarized by other EPA databases in general) for the purpose of supporting chemical listings on TRI (see fulvestrant (CASRN: 129453–61–8) and (1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) (CASRN 27619–97–2)). EPA also solicits comment on whether other methods of providing evidence to support TRI chemical listings other than listing support documents specifically drafted for the TRI action may be appropriate, such as read-across methods (*i.e.*, applying hazard data from a data-rich source chemical to a related data-poor chemical to determine potential properties or hazards).

10. EPA seeks comment on the 100-pound reporting threshold being proposed for the listing in this rulemaking. Additionally, EPA seeks comment on whether the threshold used for these proposed additions to the TRI list should be aligned with the threshold applicable to PFAS added pursuant to NDAA section 7321(b) and (c).

11. EPA seeks comment on its proposed regulatory framework for establishing PFAS categories encompassing the salts and acyl/sulfonyl halides of future PFAS acids that will be automatically added to the TRI list after a triggering event pursuant to NDAA section 7321(c).

12. EPA requests comment on what nomenclature to use for these categories (*e.g.*, “[acid name], salts and acyl/sulfonyl halides”, “[acid name], salts, acyl/sulfonyl halides, and the anhydride form”, “[acid name] and associated compounds”, or some other convention). For the “associated compounds” nomenclature, EPA would define or interpret “associated compounds” to refer to salts, acyl/sulfonyl halides, and/or anhydrides.

In addition to the requests for comment described in this document, EPA also requests comment on the additional topics identified in this document to help inform potential future TRI regulatory activities.

13. Since PFAS are ubiquitous in the environment and robust hazard data exist for well-studied PFAS (Ref. 3, 14, 70), EPA is considering additional avenues to expedite adding PFAS to the TRI list. For example, the OECD has described a standardized terminology for defining PFAS and grouping them based on their structural traits (Ref. 7). EPA has developed Markush representations to group and categorize PFAS based on generalized structures (see <https://comptox.epa.gov/dashboard/chemical-lists/PFASMARKUSH>). EPA has also

developed PFAS-specific structural representations known as ToxPrints to characterize PFAS by their atom, bond, chain, and functional group to facilitate category development (Ref. 76). More broadly, OECD has published technical guidance for the development, justification and application of category and analogue approaches. These analogue and category approaches are typically underpinned by one or more of the following similarity contexts including structural, physicochemical, metabolic, bioactivity, reactivity and (eco)toxicological similarity. While no single categorization approach will satisfy all needs and the specifics of a given category approach will likely differ depending on the intended application, such grouping approaches are well-established in the scientific literature and are widely applied within the scientific and regulatory community (Ref. 7). These approaches typically categorize PFAS based on foundational understandings of chemistry and toxicity. To this end, EPA is requesting comment on whether the Agency should identify PFAS for which there is a lack of direct evidence to support a TRI listing, but instead base the listing on similarities (*e.g.*, structural similarities) a particular PFAS shares with other PFAS for which there is sufficient evidence, and apply such evidence to the data-poor PFAS. For example, EPA is proposing to add 6:2 fluorotelomer alcohol, 6:2 fluorotelomer sulfonamide betaine, 6:2 fluorotelomer sulfonate ammonium, and 8:2 fluorotelomer sulfonic acid to the TRI list based on available data. It is also aware of other similar chemical substances such as 3:1 fluorotelomer alcohol, and 4:2 fluorotelomer alcohol. While EPA may not have hazard data specific on these chemicals, it could determine that these listings are appropriate based on generally accepted scientific principles. In this example, data on the chemicals being proposed for listing could be used as sufficient evidence to demonstrate that these other, similar chemicals (*i.e.*, 3:1 fluorotelomer alcohol and 4:2 fluorotelomer alcohol) also meet the criteria for listing on the TRI. EPA posits that X:2 and X:1 fluorotelomer alcohols and their precursors and derivatives, which are expected to break down into the corresponding X-length fluoroalkyl carboxylates, are expected to result in similar adverse effects on human health and the environment as substances already TRI-listed as well as those being proposed for addition to the TRI. EPA is considering the appropriateness of this general approach, as well as means to further speciate its application, for

these as well as other categories as described by OECD and other regulatory bodies, including EPA. EPA is soliciting comment on this approach, as well as requesting assistance in identifying additional chemicals to consider based on such an approach.

14. Pursuant to the NDAA, for PFAS added to the TRI list pursuant to NDAA section 7321(b) and (c), EPA must, within five years after the NDAA’s enactment, determine whether it is warranted to revise the 100-pound reporting threshold provided by the NDAA for chemicals added to the TRI pursuant to those paragraphs. Accordingly, EPA seeks comment on its proposal to implement a 100-pound reporting threshold for PFAS added to the TRI list pursuant to NDAA section 7321(b) and (c). Similarly, EPA seeks comment on the 100-pound reporting threshold being proposed for the listing in this rulemaking. Further, EPA is soliciting comment on whether the reporting threshold should be consistent across all PFAS on the TRI list, regardless of the specific mechanism that caused their addition to the TRI list.

15. EPA seeks comment on whether documents related to EPA actions other than those specified in Unit VII. should be identified as events that the Agency interprets as “finaliz[ing] a toxicity value” as that term is used in NDAA section 7321(c)(1)(A)(1).

16. The Agency is soliciting comment on the listing support documents specifically prepared for this action and whether they justify its proposed determination that there is sufficient evidence to establish that one or more of the criteria for listing under EPCRA section 313(d)(2) have been met.

IX. References

The following is a listing of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not itself physically located in the docket. For assistance in locating these other documents, please consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

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X. What are the Statutory and Executive Orders reviews associated with this action?

Additional information about these statutes and Executive Orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and 14094: Modernizing Regulatory Review

This action is a “significant regulatory action” as defined in Executive Order 12866 (58 FR 51735, October 4, 1993), as amended by Executive Order 14094 (88 FR 21879, April 11, 2023). Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for Executive Order 12866 review. Documentation of any changes made in response to the Executive Order 12866 review is available in the docket. EPA prepared an economic analysis of the potential impacts associated with this action. This analysis, “Economic Analysis” (Ref. 1) is also available in the docket and summarized in Unit I.D.

B. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document that EPA prepared has been assigned EPA ICR No. 2796.01 and OMB Control No. 2070-NEW (Ref. 77). You can find a copy of the ICR in the docket, and it is briefly summarized here.

Facilities subject to the reporting requirements under EPCRA section 313 and PPA section 6607 may use either EPA Toxic Chemicals Release Inventory Form R (EPA Form 9350-1), or EPA Toxic Chemicals Release Inventory Form A (EPA Form 9350-2). The Form R must be completed if a facility manufactures, processes, or otherwise uses any listed chemical above threshold quantities and meets certain other criteria. For the Form A, EPA established an alternative threshold for facilities with low annual reportable amounts of a listed toxic chemical. A facility that meets the appropriate reporting thresholds, but estimates that the total annual reportable amount of the chemical does not exceed 500 pounds per year, can take advantage of an alternative manufacture, process, or otherwise use threshold of 1 million pounds per year of the chemical, provided that certain conditions are met, and submit the Form A instead of

the Form R. In addition, respondents may designate the specific chemical identity of a substance as a trade secret pursuant to EPCRA section 322, 42 U.S.C. 11042, 40 CFR part 350.

Respondents/affected entities:

Facilities covered under EPCRA section 313 that manufacture, process or otherwise use listed PFAS see Unit I.A.

Respondent's obligation to respond:

Mandatory per EPCRA 313.

Estimated number of respondents:

356 to 1,110.

Frequency of response:

annually.

Total estimated burden: 26,693 to 83,229 burden hours in the first year and approximately 12,711 to 39,633 burden hours in the steady state (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: Approximately \$2,114,886 to \$6,594,234 in the first year of the reporting and approximately \$1,007,093 to \$3,140,123 includes \$0 annualized capital or operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to EPA using the docket identified at the beginning of this rule. EPA will respond to any ICR-related comments in the final rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs using the interface at <https://www.reginfo.gov/public/do/PRAMain>. Find this particular ICR by selecting “Currently under Review—Open for Public Comments” or by using the search function. OMB must receive comments no later than November 7, 2024.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA, 5 U.S.C. 601 *et seq.* The small entities subject to the requirements of this action are small manufacturing facilities. The Agency has determined that of the 356 to 1,110 entities estimated to be impacted by this action, 277 to 865 are small businesses; no small governments or small organizations are expected to be affected by this action. The average cost per small firm is \$6,338 (at a 2% discount rate). All small businesses affected by

this action are estimated to incur annualized cost impacts of less than 1%. Even under a worst-case scenario comparing compliance costs to average revenue of firms with between 10 (smallest number required to report) and 14 employees instead of comparing compliance costs to the weighted average revenue of small firms, there are still no costs that exceed the 1% impact threshold. Thus, this action is not expected to have a significant adverse economic impact on a substantial number of small entities. A more detailed analysis of the impacts on small entities is provided in EPA's economic analysis (Ref. 1).

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. As indicated previously, EPA estimates the costs of this action will be approximately \$2,114,886 and \$6,594,234 in the first year of reporting and approximately \$1,007,093 and \$3,140,123 in the subsequent years (Ref. 1).

E. Executive Order 13132: Federalism

This action does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999), because it will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175 (65 FR 67249, November 9, 2000) because it will not have substantial direct effects on tribal governments, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes. It does not have substantial direct effects on tribal government because this action relates to toxic chemical reporting under EPCRA section 313, which primarily affects private sector facilities. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern environmental health or safety risks that EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2–202 of Executive Order 13045.

Since this is not a “covered regulatory action,” E.O. 13045 does not apply. However, the Policy on Children's Health does apply. Although this action does not concern an environmental health or safety risk, the data collected as a result of this action will provide information about releases to the environment that could be used to inform the public on potential exposures to toxic chemical releases, pursuant to the right-to-know principles. EPA also believes that the information obtained as a result of this action could be used by government agencies, researchers, and others to identify potential problems, set priorities, and take appropriate steps to reduce any potential exposures and related human health or environmental risks identified as a result of increased knowledge of exposures to PFAS.

H. National Technology Transfer and Advancement Act (NTTAA)

This action does not involve technical standards under the NTTAA section 12(d), 15 U.S.C. 272.

I. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations and Executive Order 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All

EPA believes that this type of action does not directly impact human health or environmental conditions. Although this action does not directly impact human health or environmental conditions, EPA identifies and addresses environmental justice concerns in accordance with Executive Orders 12898 (59 FR 7629, February 16, 1994) and 14096 (88 FR 25251, April 26, 2023) by requiring reporting. This regulatory action makes changes to the reporting requirements for PFAS that will result in more information being collected and provided to the public. By requiring reporting of this additional information, EPA provides communities

across the U.S. (including communities with environmental justice concerns) with access to data which they may then use to seek lower exposures and consequently reduce chemical risks for themselves and their children. This information can also be used by government agencies and others to identify potential problems, set priorities, and take appropriate steps to reduce any potential risks to human health and the environment. Therefore, the informational benefits of the action will have a positive impact on the human health and environmental impacts on communities with environmental justice concerns.

J. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a “significant energy action” as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution or use of energy.

List of Subjects in 40 CFR Part 372

Environmental protection, Community right-to-know, Reporting and recordkeeping requirements, and Toxic chemicals.

Dated: October 1, 2024.

Michal Freedhoff,

Assistant Administrator, Office of Chemical Safety and Pollution Prevention.

Therefore, for the reasons stated in the preamble, EPA is proposing to amend 40 CFR chapter I as follows:

PART 372—TOXIC CHEMICAL RELEASE REPORTING: COMMUNITY RIGHT-TO-KNOW

- 1. The authority citation for part 372 continues to read as follows:

Authority: 42 U.S.C. 11023 and 11048.

- 2. Amend § 372.28 by:

- a. In table 1 to paragraph (a)(1), revising the entry for “Per- and polyfluoroalkyl substances”; and
- b. In table 2 to paragraph (a)(2), adding, in alphabetical order, an entry for “Per- and polyfluoroalkyl substances”.

The revision and addition read as follows:

§ 372.28 Lower thresholds for chemicals of special concern.

- (a) * * *
- (1) * * *

TABLE 1 TO PARAGRAPH (a)(1)

Chemical name	CAS No.	Reporting threshold (in pounds)
Per- and polyfluoroalkyl substances (Individually listed chemicals added by 15 U.S.C. 8921(b)(1) and (c)(1) and pursuant to 42 U.S.C. 11023(d)(2)). (EPA periodically updates the lists of covered chemicals at § 372.65(d) and (e) to reflect chemicals that have been added by 15 U.S.C. 8921).	see § 372.65(d) and (e).	100

(2) * * *

TABLE 2 TO PARAGRAPH (a)(2)

Category name	Reporting threshold (in pounds)
Per- and polyfluoroalkyl substances (Chemical categories added by 15 U.S.C. 8921 (b)(1) and (c)(1) and pursuant to 42 U.S.C. 11023(d)(2)). (EPA periodically updates the lists of covered chemicals at § 372.65(f) to reflect chemical categories that have been added by 15 U.S.C. 8921)	100

■ 3. Amend § 372.65 by:

■ a. Revising the introductory text;

■ b. In table 4 to paragraph (d):

■ i. Removing the entries for “Ammonium perfluorobutanoate”; “Ammonium perfluorooctanoate”; “Chromium(III) perfluorooctanoate”; “Ethanaminium, N,N,N-triethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic acid (1:1)”; “Hexafluoropropylene oxide dimer acid”; “Hexafluoropropylene oxide dimer acid ammonium salt”; “1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, ammonium salt”; “1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, potassium salt”; “1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1)”; “Lithium (perfluorooctane)sulfonate”; “1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ammonium salt”; “Octanoyl fluoride, pentadecafluoro-”; “Perfluorobutane sulfonic acid”; “Perfluorobutanesulfonate”; “Perfluorobutanoate”; “Perfluorobutanoic acid”; “Perfluorodecanoic acid”; “Perfluorododecanoic acid”; “Perfluorohexanesulfonic acid”; “Perfluorononanoic acid”; “Perfluorooctane sulfonic acid”; and “Perfluorooctanoic acid”; “Perfluorooctylsulfonyl fluoride”; “Potassium heptafluorobutanoate”; “Potassium perfluorobutane sulfonate”;

“Potassium perfluorooctanesulfonate”; “Potassium perfluorooctanoate”; “Silver(I) perfluorooctanoate”; “Sodium perfluorobutanoate”; and “Sodium perfluorooctanoate”;

■ ii. Adding, in alphabetical order, entries for “Broflanilide”; “1-Butane sulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methyl-”; “1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-”; “Cyclopentene, 1,3,3,4,4,5,5-heptafluoro-”; “Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]-, lithium salt”; “6:2 Fluorotelomer alcohol”; “Fulvestrant”; “Hexaflumuron”; “Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)-”; “Perfluorotridecanoic acid”; “Perfluoro(2-ethoxy-2-fluoroethoxy) acetic acid ammonium salt”; “2-Propenoic acid, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl ester”; “Pyrifluquinazon”; “Tetraconazole”; “Triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tri-deca-fluorooctyl)silane”; and “Trifluoro(trifluoromethyl) oxirane”;

■ c. In table 5 to paragraph (e):

■ i. Removing the entries for “307–35–7”; “307–55–1”; “335–66–0”; “335–67–1”; “335–76–2”; “335–93–3”; “335–95–5”; “355–46–4”; “375–22–4”; “375–73–5”; “375–95–1”; “1763–23–1”; “2218–54–4”; “2395–00–8”; “2795–39–3”; “2966–54–3”; “3825–26–1”; “3871–99–6”; “10495–86–0”; “13252–13–6”; “29081–56–9”; “29420–49–3”; “29457–

72–5”; “45048–62–2”; “45187–15–3”; “56773–42–3”; “62037–80–3”; “68141–02–6”; “68259–08–5”; and “70225–16–0”;

■ ii. Adding, in numerical order, the entries for “428–59–1”; “647–42–7”; “1892–03–1”; “34454–97–2”; “51851–37–7”; “67584–55–8”; “68298–12–4”; “72629–94–8”; “86479–06–3”; “112281–77–3”; “129453–61–8”; “132182–92–4”; “132843–44–8”; “337458–27–2”; “908020–52–0”; and “1207727–04–5”; and

■ d. Adding paragraph (f).

The revisions and additions read as follows:

§ 372.65 Chemicals and chemical categories to which this part applies.

The requirements of this part apply to the chemicals and chemical categories listed in this section. This section contains six listings. Paragraph (a) of this section is an alphabetical order listing of those chemicals that have an associated Chemical Abstracts Service (CAS) Registry number. Paragraph (b) of this section contains a CAS number order list of the same chemicals listed in paragraph (a) of this section. Paragraph (c) of this section contains the chemical categories for which reporting is required. These chemical categories are listed in alphabetical order and do not have CAS numbers. Paragraph (d) of this section is an alphabetical order listing of the per- and polyfluoroalkyl substances and their associated CAS Registry number. Paragraph (e) of this

section contains a CAS number order list of the same chemicals listed in paragraph (d) of this section. Each listing identifies the effective date for reporting under § 372.30. Paragraph (f) of this section is an alphabetical order listing of the per- and polyfluoroalkyl substances chemical categories for which reporting is required. Per- and

polyfluoroalkyl substances automatically added to the list of chemicals for which reporting is required pursuant to the Fiscal Year 2020 National Defense Authorization Act, section 7321(c), shall be incorporated as chemical categories to include the acid and associated salts, acyl/sulfonyl halides, and anhydride of

that acid if added pursuant to a published final toxicity value that provides toxicity values for an acid and associated salts and/or acyl/sulfonyl halides and/or anhydride.

* * * * *

(d) * * *

TABLE 4 TO PARAGRAPH (d)

Chemical name	CAS No.	Effective date
Broflanilide	1207727-04-5	1/1/2025
1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methyl-	34454-97-2	1/1/2025
1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-	68298-12-4	1/1/2025
Cyclopentene, 1,3,3,4,4,5,5-heptafluoro-	1892-03-1	1/1/2025
Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]-, lithium salt	132843-44-8	1/1/2025
6:2 Fluorotelomer alcohol	647-42-7	1/1/2025
Fulvestrant	129453-61-8	1/1/2025
Hexaflumuron	86479-06-3	1/1/2025
Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)-	132182-92-4	1/1/2025
Perfluorotridecanoic acid	72629-94-8	1/1/2025
Perfluoro(2-ethoxy-2-fluoroethoxy)acetic acid ammonium salt	908020-52-0	1/1/2025
2-Propenoic acid, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl ester	67584-55-8	1/1/2025
Pyrifluquinazon	337458-27-2	1/1/2025
Tetraconazole	112281-77-3	1/1/2025
Triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tri-deca-fluorooctyl)silane	51851-37-7	1/1/2025
Trifluoro(trifluoromethyl) oxirane	428-59-1	1/1/2025

(e) * * *

TABLE 5 TO PARAGRAPH (e)

CAS No.	Chemical name	Effective date
428–59–1	Trifluoro(trifluoromethyl) oxirane	1/1/2025
647–42–7	6:2 Fluorotelomer alcohol	1/1/2025
1892–03–1	Cyclopentene, 1,3,3,4,4,5,5-heptafluoro-	1/1/2025
34454–97–2	1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methyl-	1/1/2025
51851–37–7	Triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-trideca-fluorooctyl)silane	1/1/2025
67584–55–8	2-Propenoic acid, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl ester	1/1/2025
68298–12–4	1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-	1/1/2025
72629–94–8	Perfluorotridecanoic acid	1/1/2025
86479–06–3	Hexaflumuron	1/1/2025
112281–77–3	Tetraconazole	1/1/2025
129453–61–8	Fulvestrant	1/1/2025
132182–92–4	Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)-	1/1/2025
132843–44–8	Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]-, lithium salt	1/1/2025
337458–27–2	Pyrifluquinazon	1/1/2025
908020–52–0	Perfluoro(2-ethoxy-2-fluoroethoxy)acetic acid ammonium salt	1/1/2025
1207727–04–5	Broflanilide	1/1/2025

(f) *Per- and polyfluoroalkyl chemical category listing.*

TABLE 6 TO PARAGRAPH (f)

Category name	Effective date
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS) (CASRN 756426–58–1), salts, sulfonyl halides, and anhydride (includes all associated salts and sulfonyl halides, including the following):	1/1/2025
73606–19–6: potassium 9-chlorohexadecafluoro-3-oxanonane-1 sulfonate	
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) (CASRN 763051–92–9), salts, sulfonyl halides, and anhydride (includes all associated salts and sulfonyl halides, including the following):	1/1/2025
83329–89–9: potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate	
Hexafluoropropylene oxide dimer acid (HFPO-DA, GenX) (CASRN 13252–13–6), salts, and acyl halides (includes all associated salts and acyl halides, including the following):	1/1/2025
2062–98–8: propanoyl fluoride, 2,3,3,3-tetrafluoro-2 (heptafluoropropoxy)-]	
62037–80–3: ammonium perfluoro-2-methyl-3-oxahexanoate	
67118–55–2: potassium 2,3,3,3-tetrafluoro-2- (heptafluoropropoxy)propanoate	

TABLE 6 TO PARAGRAPH (f)—Continued

Category name	Effective date
67963–75–1: sodium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propanoate Perfluorobutanesulfonic acid (PFBS), salts, sulfonyl halides, and anhydride (CASRN 375–73–5) (includes all associated salts and sulfonyl halides, including the following):	1/1/2025
375–72–4: perfluorobutanesulfonyl fluoride	
29420–49–3: potassium perfluorobutane sulfonate	
36913–91–4: perfluorobutanesulfonic anhydride	
60453–92–1: sodium nonafluorobutane-1-sulfonate	
68259–10–9: ammonium perfluorobutanesulfonate	
70225–18–2: bis(2-hydroxyethyl)ammonium perfluorobutanesulfonate	
131651–65–5: lithium nonafluorobutane-1-sulfonate	
220689–12–3: tetrabutylphosphonium perfluorobutanesulfonate	
507453–86–3: magnesium nonafluorobutanesulfonate	
Perfluorobutanoic acid (PFBA) (CASRN 375–22–4), salts, acyl halides, and anhydride (includes all associated salts and acyl halides, including the following):	1/1/2025
335–42–2: perfluorobutanoyl fluoride	
336–59–4: perfluorobutanoic anhydride	
375–16–6: heptafluorobutyryl chloride	
2218–54–4: sodium perfluorobutanoate	
2966–54–3: potassium perfluorobutanoate	
3794–64–7: silver heptafluorobutyrate	
10495–86–0: ammonium perfluorobutanoate	
73755–28–9: rhodium(II) perfluorobutyrate dimer	
Perfluorodecanoic acid (PFDA) (CASRN 335–76–2), salts, acyl halides, and anhydride (includes all associated salts and acyl halides, including the following):	1/1/2025
307–38–0: perfluorodecanoyl chloride	
3108–42–7: ammonium Perfluorodecanoate	
3830–45–3: sodium Perfluorodecanoate	
942199–24–8: perfluorodecanoic anhydride	
Perfluorododecanoic acid (PFDoA) (CASRN 307–55–1), salts, acyl halides, and anhydride (includes all associated salts and acyl halides, including the following):	1/1/2025
3793–74–6: ammonium tricosafuorododecanoate	
1456735–80–0: perfluorododecanoic anhydride	
Perfluorohexanesulfonic acid (PFHxS) (CASRN 355–46–4), salts, sulfonyl halides, and anhydride (includes all associated salts and sulfonyl halides, including the following):	1/1/2025
423–50–7: perfluorohexanesulfonyl fluoride	
3871–99–6: potassium perfluorohexanesulfonate	
55120–77–9: lithium perfluorohexanesulfonate	
68259–08–5: ammonium perfluorohexanesulfonate	
70225–16–0: bis(2-hydroxyethyl)ammonium perfluorohexanesulfonate	
82382–12–5: sodium perfluorohexanesulfonate	
109065–55–6: perfluorohexanesulfonic anhydride	
Perfluorohexanoic acid (PFHxA) (CASRN 307–24–4), salts, acyl halides, and anhydride (includes all associated salts and acyl halides, including the following):	1/1/2025
308–13–4: perfluorohexanoic anhydride	
336–02–7: silver perfluorohexanoate	
355–38–4: perfluorohexanoyl fluoride	
335–53–5: perfluorohexanoyl chloride	
2923–26–4: sodium perfluorohexanoate	
3109–94–2: potassium undecafluorohexanoate	
21615–47–4: ammonium perfluorohexanoate	
Perfluorononanoic acid (PFNA) (CASRN 375–95–1), salts, acyl halides, and anhydride (includes all associated salts and acyl halides, including the following):	1/1/2025
558–95–2: heptadecafluorononanoyl fluoride	
4149–60–4: ammonium perfluorononanoate	
21049–38–7: potassium perfluorononanoate	
21049–39–8: sodium heptadecafluorononanoate	
52447–23–1: heptadecafluorononanoyl chloride	
228407–54–3: perfluorononanoic anhydride	
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS) (CASRN 27619–97–2), salts, sulfonyl halides, and anhydride (includes all associated salts and sulfonyl halides, including the following):	1/1/2025
2043–57–4: 1H,1H,2H,2H-Perfluorooctyl iodide	
27619–89–2: 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctanesulphonyl chloride	
27619–94–9: sodium 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctane-1-sulfonate	
59587–38–1: potassium 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctanesulfonate	
59587–39–2: 6:2 fluorotelomer sulfonate ammonium	
1807944–82–6: 1-octanesulfonic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-, barium salt (2:1)	
Perfluorooctanoic acid (PFOA) (CASRN 335–67–1), salts, acyl halides, and anhydride (includes all associated salts and acyl halides, including the following):	1/1/2025
335–64–8: pentadecafluorooctanoyl chloride	
335–66–0: pentadecafluorooctanoyl fluoride	
335–93–3: silver perfluorooctanoate	
335–95–5: sodium perfluorooctanoate	

TABLE 6 TO PARAGRAPH (f)—Continued

Category name	Effective date
2395–00–8: potassium perfluorooctanoate 3825–26–1: ammonium perfluorooctanoate 17125–58–5: lithium perfluorooctanoate 17125–60–9: cesium perfluorooctanoate 33496–48–9: perfluorooctanoic anhydride 68141–02–6: chromium perfluorooctanoate 98065–31–7: potassium pentadecafluorooctanoate—water (1:1:2) Perfluorooctanesulfonic acid (PFOS) (CASRN 1763–23–1), salts, sulfonyl halides, and anhydride (includes all associated salts and sulfonyl halides, including the following): 307–35–7: perfluorooctylsulfonyl fluoride 423–92–7: perfluorooctanesulfonic anhydride 2795–39–3: potassium perfluorooctanesulfonate 4021–47–0: sodium perfluorooctanesulfonate 29081–56–9: ammonium perfluorooctanesulfonate 29457–72–5: lithium perfluorooctanesulfonate 56773–42–3: tetraethylammonium perfluorooctanesulfonate 70225–14–8: 1-octanesulfonic acid,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd with 2,2'-iminobis[ethanol] (1:1) 91036–71–4: magnesium bis(heptadecafluorooctanesulfonate) 111873–33–7: tetrabutylammonium perfluorooctanesulfonate Perfluoropropanoic acid (PFPrA) (CASRN 422–64–0), salts, acyl halides, and anhydride (includes all associated salts and acyl halides, including the following): 356–42–3: pentafluoropropanoic anhydride 378–76–7: potassium perfluoropropanoate 378–77–8: sodium perfluoropropanoate 422–59–3: perfluoropropanoyl chloride 422–61–7: perfluoropropanoyl fluoride Perfluoroundecanoic acid (PFUnA) (CASRN 2058–94–8), salts, acyl halides, and anhydride (includes all associated salts and acyl halides, including the following): 4234–23–5: ammonium perfluoroundecanoate 30377–53–8: potassium perfluoroundecanoate 60871–96–7: sodium perfluoroundecanoate 97163–17–2: calcium perfluoroundecanoate 942199–03–3: perfluoroundecanoic anhydride	1/1/2025 1/1/2025 1/1/2025

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